

# FIBERS SITE GROUP

September 11, 2017

***Via Email Electronic Copy***

Adalberto Bosque, PhD, MBA, REM, CEA  
Response and Remediation Branch  
U.S Environmental Protection Agency  
City View Plaza II - Suite 7000  
48 RD, 165 Km. 1.2  
Guaynabo, PR 00968-8069

Subject: RD/RA Monthly Report – August 2017  
Fibers Public Supply Wells Site  
Guayama, Puerto Rico

Dear Mr. Bosque:

On behalf of the Fibers Public Supply Wells Site Settling Defendants, we are submitting the attached RD/RA Monthly Report prepared pursuant to the Consent Decree (Civil Action No. 92-2486) in the matter of *Unites States v. Anaquest Caribe, Inc. et al*, Section IX, Paragraph 30, Reporting Requirements.

Please feel free to contact Mr. James Kirschner of ARCADIS at (602) 797-4519 or me at (724) 544-4874 if you have any questions or comments regarding this submittal.

Sincerely,



Joe Biss, CHMM  
Fibers Site Group Project Coordinator  
EHS Support LLC

Copies:

Chief, New York/Caribbean Superfund Branch, Attn. Mel Hauptman- via email only  
Ms. Margo Ludmer, Assistant Regional Counsel – via email only  
Chief, Environmental Enforcement Division, U.S. Department of Justice (DOJ #90-11-2-768)  
Amarilis Rodriguez Mendez, State Remedial Project Manager, Puerto Rico Environmental Quality Board - via email only  
Ms. Katherine Mishkin, Hydrogeologist, USEPA Superfund Technical Support Section – via email only  
Ms. Enid Diaz, Departamento de Recursos Naturales y Ambientales  
Mr. Jorge Morales, PRIDCO - via email only  
Mr. Joel Melendez Rodriguez, PRIDCO - via email only  
Ms. Ana Palou Balsa, PRIDCO – via email only  
Mr. Dan Vineyard, Jackson Walker- via email only  
James Kirschner, Arcadis - via email only

RD/RA Monthly Report – August 2017  
Fibers Public Supply Wells Superfund Site  
Guayama, Puerto Rico

**(a) Description of actions which have been taken toward achieving compliance with this Decree.**

Fibers Air Stripping System

The Fibers groundwater extraction and treatment system (GWETS) was operational for approximately 94% of the time during August 2017. The GWETS had five automated shut downs due to power outages and one shut down due to GWETS maintenance. In each of these instances the GWETS was restarted no later than the next business day.

A summary of the daily treatment system operating records is presented in Table 1. The GWETS average flow rates are depicted on Figure 1. The GWETS operated at an average flow rate of 285 gallons per minute (gpm) and treated approximately 12.67 million gallons of water. To date (since May 1999), approximately 3.15 billion gallons of water have been treated at the Fibers Site. The total volume of water treated to date correlates with the treatment system influent flow meter totalizer reading.

**(b) Summary of all sampling results and tests, and all other data received or generated by Settling Defendants.**

Arcadis U.S., Inc. (Arcadis) collected split groundwater influent and effluent samples on August 1, 2017. The samples were submitted and analyzed by Pace Analytical Services, Inc. (Pace) in St. Rose, Louisiana and Environmental Quality Laboratories, Inc. (EQLAB) in Bayamon, Puerto Rico. A summary of the August 1, 2017 GWETS Laboratory Analytical Results is provided in Table 2. A summary of GWETS influent groundwater concentrations of tetrachloroethene (PCE) and total haloethers, as reported by Pace, is depicted on Figures 2 and 3, respectively.

Arcadis performed a data quality assessment (validation) of the laboratory analytical results reported by Pace. Results are summarized in the Data Review Report #28218R and provided as Attachment 1. A copy of the chain of custody and annotated sample analysis data sheets are provided as an attachment to the Data Review Report. A copy of the complete Pace Laboratory Analytical Report #2058632 is provided as Attachment 2.

Arcadis performed a data quality assessment (validation) of the laboratory analytical results reported by EQLAB. Results are summarized in the Data Review Report #28274R and provided as Attachment 3. A copy of the chain of custody and annotated sample analysis data sheets are provided as an attachment to the Data Review Report. A copy of the complete EQLAB Laboratory Analytical Report #236929 (WO 655-04-26) is provided as Attachment 4.

A copy of the GWETS Sampling and Monitoring Field Form, documenting sample collection information, individual flow rates at the three groundwater extraction wells and treatment system parameters is provided as Attachment 5.

**(c) List of all work plans, plans and other deliverables completed and submitted.**

None for this reporting period.

**(d) Description of all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next six weeks.**

A summary of results from the second phase of a subsurface soil investigation on Wyeth LLC leased portion of the Site is anticipated to be submitted to the United States Environmental Protection Agency (USEPA) within the next six weeks.

**(e) Information regarding the percentage completion, unresolved delays encountered or anticipated.**

Supplemental Subsurface Soil Investigations – In progress  
Construction Activities – 100% complete.  
System Start-Up – 100% complete.  
Start-Up Performance Monitoring – 100% complete.  
Long-Term Operation & Maintenance Period – In progress.

**(f) List of any modification to work plans or other schedules the Settling Defendants have proposed.**

None.

**(g) Description of activities undertaken in support of the Community Relations Plan.**

No support activities have been requested for the next planning period.

**(h) Actions undertaken to address outside parties concerns.**

No concerns from outside parties were encountered during this reporting period.

## Tables

Table 1  
 Summary of Daily Treatment System Operating Records - August 2017  
 Fibers Public Supply Wells Superfund Site  
 Guayama, Puerto Rico

Recording Date	Influent Flow (gpm) <sup>1</sup>	Effluent Flow (gpm) <sup>2</sup>	RW-2 (gpm) <sup>3</sup>	RW-4 (gpm) <sup>4</sup>	RW-5 (gpm) <sup>5</sup>	pH <sup>6</sup>	Comments
8/1/2017	217	275	68	104	51	8.3	Started GWETS.
8/2/2017	306	372	95	145	70	8.3	
8/3/2017	306	371	95	145	70	8.3	
8/4/2017	308	372	95	145	70	8.3	
8/5/2017	306	371	95	145	70	8.4	
8/6/2017	129	148	42	62	30	8.4	GWETS maintenance.
8/7/2017	128	155	41	62	30	8.5	GWETS maintenance; started system.
8/8/2017	306	372	95	145	70	8.4	GWETS maintenance.
8/9/2017	306	372	95	145	70	8.4	GWETS maintenance.
8/10/2017	306	372	95	145	70	8.3	
8/11/2017	302	365	91	145	70	8.3	
8/12/2017	306	371	95	145	70	8.3	
8/13/2017	302	366	91	145	70	8.3	
8/14/2017	302	368	91	145	70	8.3	
8/15/2017	300	371	88	145	70	8.3	
8/16/2017	303	363	87	145	70	8.3	
8/17/2017	297	362	84	145	70	8.4	Power outage; system auto restarted.
8/18/2017	306	374	95	145	70	8.3	
8/19/2017	306	374	95	145	70	8.3	
8/20/2017	306	374	95	145	70	8.3	Power outage; system auto restarted.
8/21/2017	128	155	41	62	30	8.7	Power outage. GWETS maintenance; started system.
8/22/2017	306	373	95	145	70	8.6	GWETS maintenance.
8/23/2017	306	373	95	145	70	8.5	GWETS maintenance.
8/24/2017	305	373	95	145	70	8.4	GWETS maintenance.
8/25/2017	306	374	95	145	70	8.4	
8/26/2017	305	374	95	145	70	8.4	
8/27/2017	309	377	95	145	70	8.4	Power outage; system auto restarted.
8/28/2017	306	374	95	145	70	8.4	
8/29/2017	305	375	95	145	70	8.4	Power outage; system auto restarted.
8/30/2017	305	374	95	145	70	8.4	
8/31/2017	306	375	95	145	70	8.4	
<b>Monthly Average</b>	285	347	88	136	66	8.4	

Notes:

Flow rates are 24-hour daily average.

gpm = gallons per minute.

<sup>1</sup> = Recorded from instrument FIT-101.

<sup>2</sup> = Recorded from instrument FIT-301.

<sup>3</sup> = Recorded from instrument RW2 FIT.

<sup>4</sup> = Recorded from instrument RW4 FIT.

<sup>5</sup> = Recorded from instrument RW5 FIT.

<sup>6</sup> = Recorded from instrument pHIT-201A.

Table 2  
 Summary of Treatment System Laboratory Analytical Results – Split Samples  
**Collected at the Treatment System Compound August 1, 2017**  
 Fibers Public Supply Wells Superfund Site  
 Guayama, Puerto Rico

Fibers Groundwater Extraction and Treatment System

Laboratory analytical results (split samples) for water samples collected at the influent and effluent sample tap locations from the Fibers Groundwater Extraction and Treatment System on August 1, 2017 are presented below. Split samples were submitted to Pace Analytical Services, Inc. (PACE) in St. Rose, Louisiana and to Environmental Quality Laboratories, Inc. (EQLAB) in Bayamon, Puerto Rico to investigate past acetone detections in the influent and effluent treatment system water samples. Analytical results from both laboratories are presented below. The treatment system average influent flow rate at the time the samples were collected was 305 gallons per minute (gpm).

Compound	VOC (µg/L)							
	Sample ID							
	EFF-20170801		EFFDUP-20170801		INF-20170801		TB-20170801	
	PACE	EQLAB	PACE	EQLAB	PACE	EQLAB	PACE	EQLAB
Tetrachloroethene	ND	ND	ND	ND	6.6	6.70	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	BDL U	ND	ND
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ND	ND	ND	ND	ND	ND	ND	ND
Acrolein	ND	25.0 UJ	ND	ND	ND	ND	ND	ND
Bromoform	ND	1.70 J	ND	2.10 J	ND	ND	ND	ND
Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloroethyl Vinyl Ether	NA	R	NA	R	NA	R	NA	R
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane	ND	1.2 U	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	1.50 J	ND	2.20 J	ND		ND	
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloropropene	NA	1.4 UJ	NA	ND	NA	ND	NA	ND
Iodomethane	NA	R	NA	ND	NA	ND	NA	ND
Naphthalene	NA	R	NA	ND	NA	ND	NA	ND
Trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride (Dichloromethane)	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	R	R	ND	ND	ND	ND	1.9	ND
Trans-1,4-Dichloro-2-butene	NA	R	NA	ND	NA	ND	NA	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	BDL	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND	ND	ND

Compound	VOC (µg/L)							
	Sample ID							
	EFF-20170801		EFFDUP-20170801		INF-20170801		TB-20170801	
	PACE	EQLAB	PACE	EQLAB	PACE	EQLAB	PACE	EQLAB
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichlorotrifluoroethane	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	NA	1.2 U	NA	ND	NA	ND	NA	ND
1,2,4-Trimethylbenzene	NA	R	NA	ND	NA	ND	NA	ND
1,3,5-Trimethylbenzene	NA	R	NA	ND	NA	ND	NA	ND
4-Isopropyltoluene	NA	1.4 UJ	NA	ND	NA	ND	NA	ND
Vinyl Acetate	NA	R	NA	ND	NA	ND	NA	ND
Vinyl Chloride	ND	1.2 UJ	ND	ND	ND	ND	ND	ND
m&p-Xylene	2.0 UJ	1.8 UJ	ND	ND	ND	ND	ND	ND
o-Xylene	ND	2.3 UJ	ND	ND	ND	ND	ND	ND
Enflurane	ND	NA	ND	NA	1.4	NA	ND	NA
Haloether 229	ND	NA	ND	NA	20.6	NA	ND	NA
Haloether 406	ND	NA	ND	NA	ND	NA	ND	NA
Haloether 508	ND	NA	ND	NA	46.9	NA	ND	NA
Haloether 528	ND	NA	ND	NA	ND	NA	ND	NA
Halomar	ND	NA	ND	NA	1.0	NA	ND	NA
Isoflurane	ND	NA	ND	NA	72.7	NA	ND	NA
Total Haloethers	ND	NA	ND	NA	143	NA	ND	NA
Other VOC	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

VOC = volatile organic compounds.

µg/L = micrograms per liter.

EFF = effluent sample.

EFFDUP = effluent duplicate sample.

INF = influent sample.

TB = trip blank.

ND = not detected at or above laboratory reporting limit.

J = the compound was positively identified; however, the associated numerical value is an estimated concentration only.

UJ = the compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

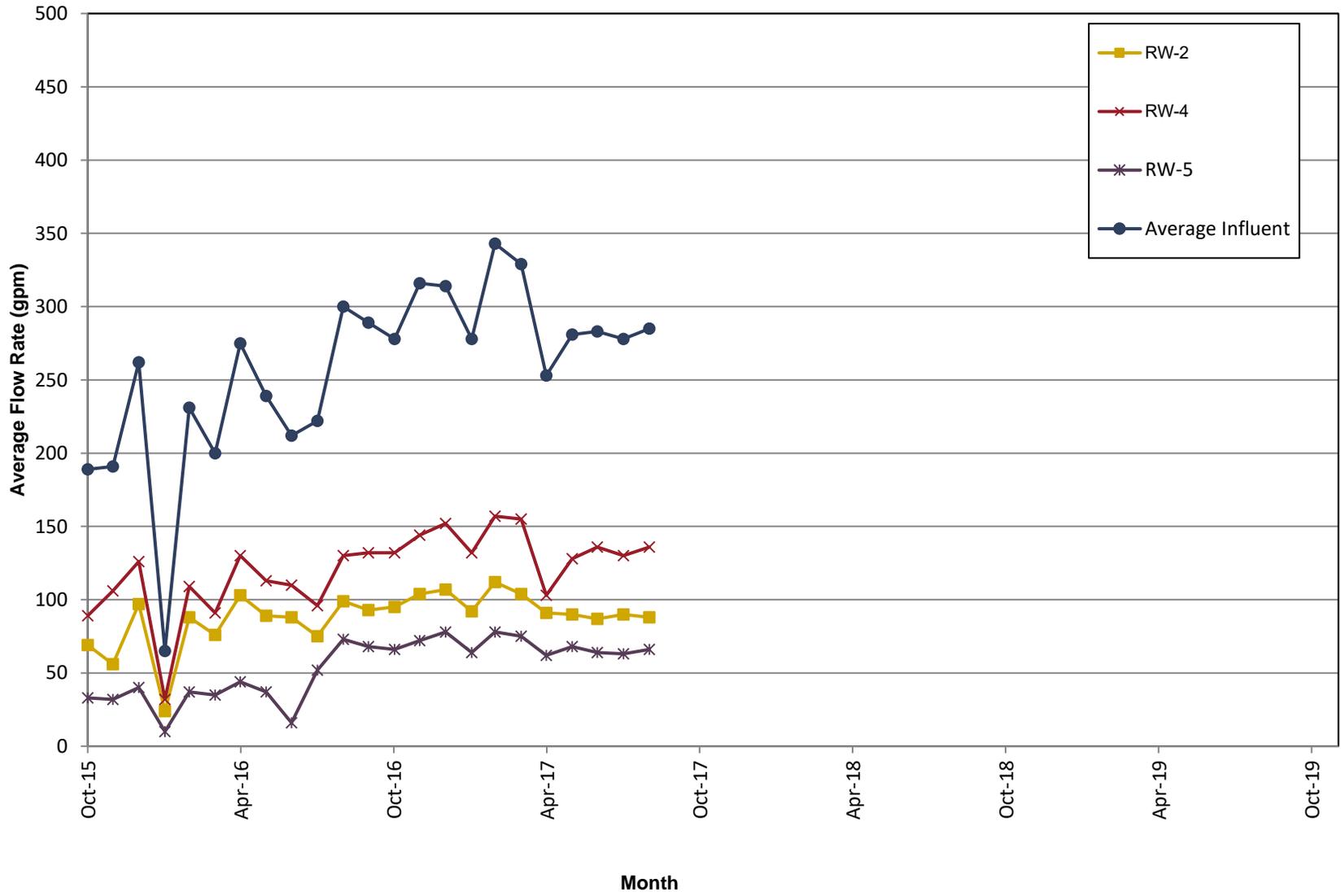
R = rejected.

NA = not analyzed.

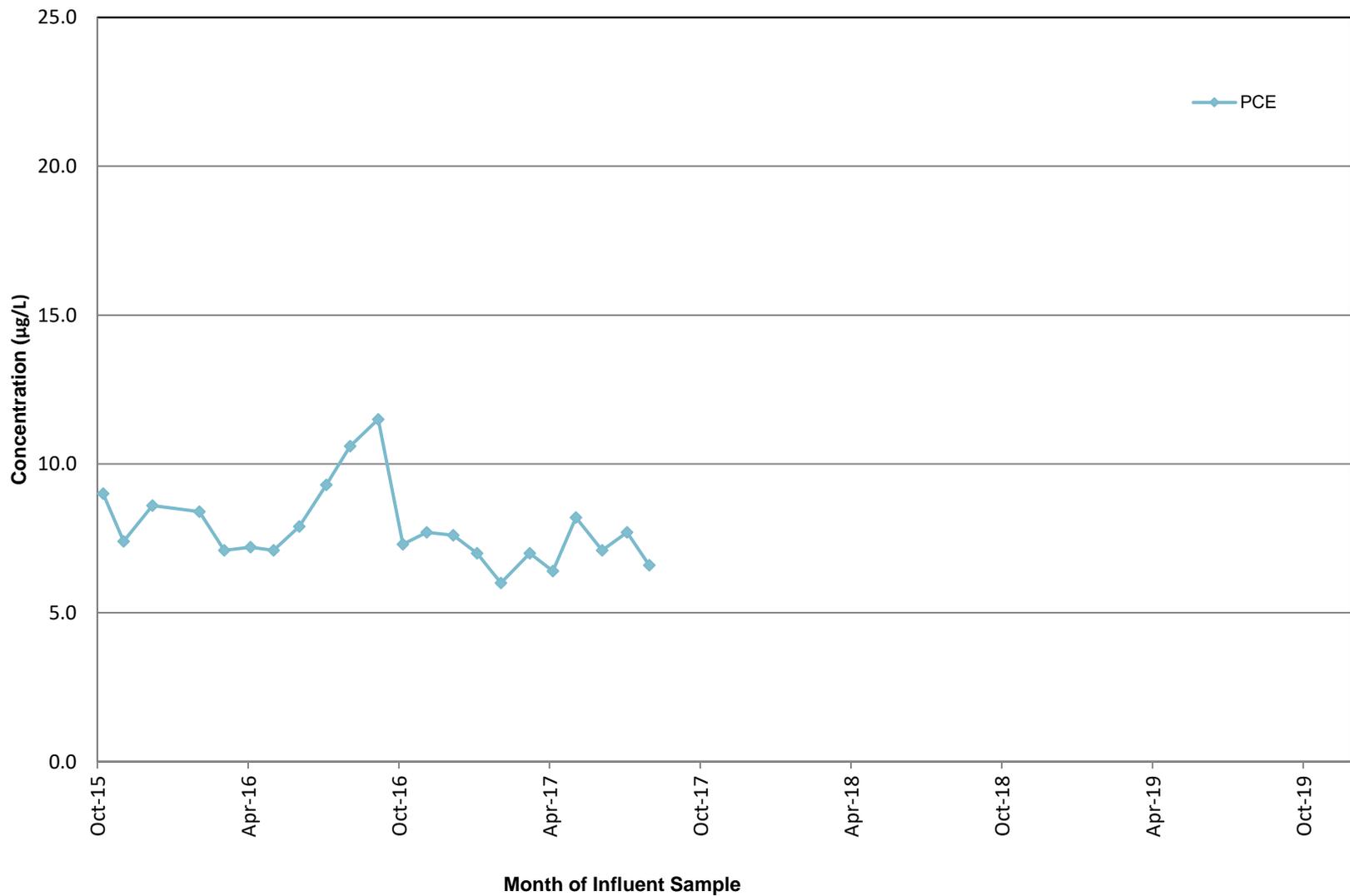
BDL = below detection limit.

## Figures

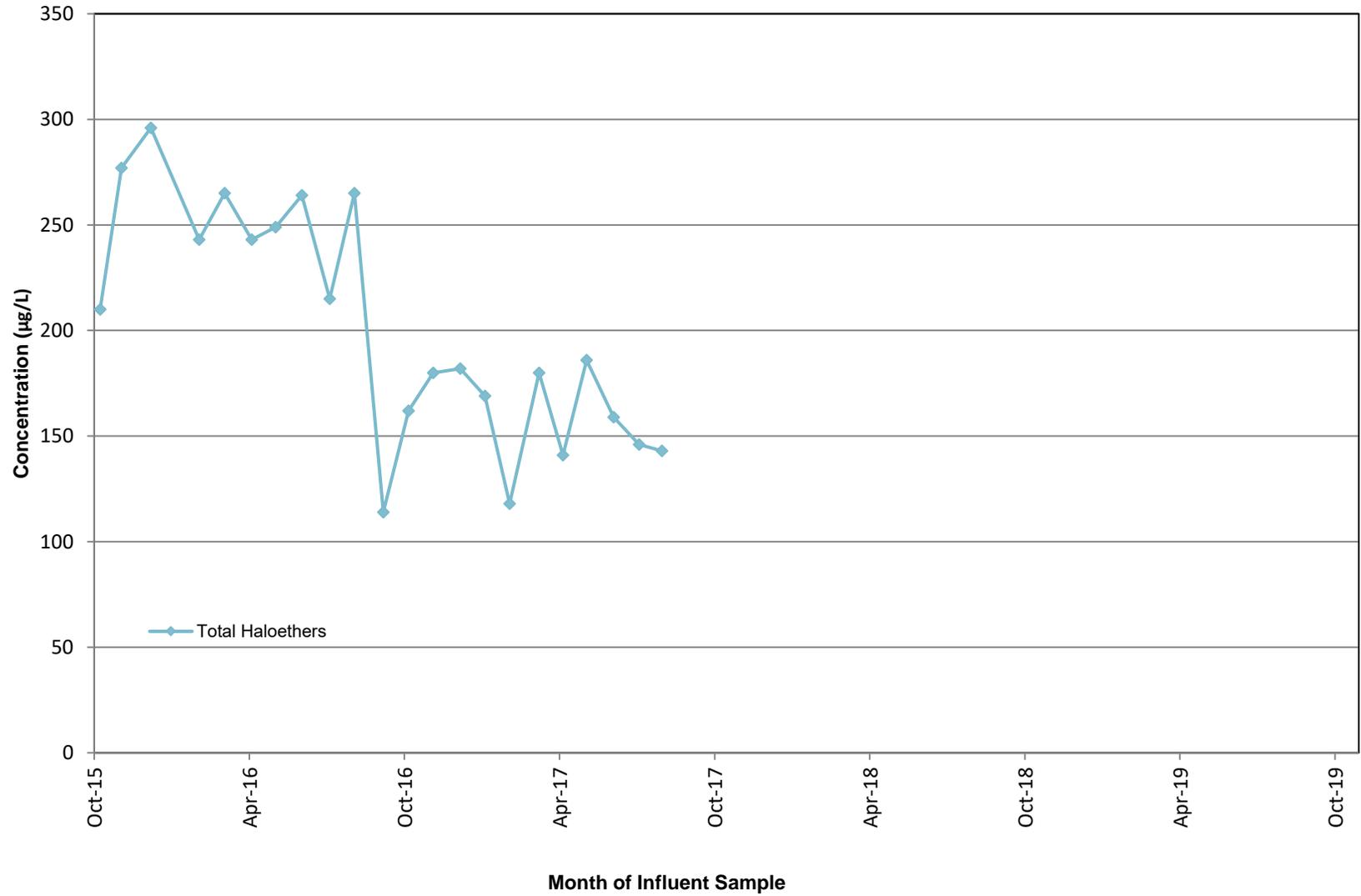
**Figure 1**  
**Fibers Public Supply Wells Superfund Site**  
**Summary of Treatment System Flow Rates**



**Figure 2**  
**Fibers Public Supply Wells Superfund Site**  
**Treatment System Influent -**  
**Tetrachloroethene (PCE) Concentrations**



**Figure 3**  
**Fibers Public Supply Wells Superfund Site**  
**Treatment System Influent -**  
**Total Haloethers Concentrations**



**Attachment 1**  
**Data Review Report #28218R**

## **Fibers Group**

### **Data Review**

GUAYAMA, PUERTO RICO

Volatiles Analyses

SDG #2058632

Analyses Performed By:  
Pace Analytical Services, Inc.  
New Orleans, Louisiana

Report: #28218R

Review Level: Tier II

Project: CO001911.0005.1705A

## SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #2058632 for samples collected in association with the Fibers Group Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Included with this assessment are the validation annotated sample result sheets and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	TPH	MET	MISC
TB-20170801	2058632001	Water	08/01/2017		X				
INF-20170801	2058632002	Water	08/01/2017		X				
EFF-20170801	2058632003	Water	08/01/2017		X				
EFF-DUP-20170801	2058632004	Water	08/01/2017	EFF-20170801	X				

Note:

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location EFF-20170801.

## ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

# VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

## 1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C.

s.u. Standard units

All samples were analyzed within acceptable holding times.

## 2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were detected in the associated QA blanks; however, the associated sample results were greater than the BAL and/or were non-detect. Therefore, no qualification of the sample results was required.

## 3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

## 4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
EFF-20170801	Styrene	<10%	<10%
	m&p-Xylene	< LL but > 10%	< LL but > 10%
	Haloether 229	> UL	> UL
	1,1,2-Trichlorotrifluoroethane		

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

## 5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

Sample locations associated with LCS analysis exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Compound	LCS Recovery
TB-20170801 EFF-20170801 EFF-DUP-20170801	Haloether 229	>UL

The criteria used to evaluate the LCS recoveries are presented in the following table. In the case of an LCS deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J

## 6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
EFF-20170801 / EFF-DUP-20170801	All compounds	U	U	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

## 7. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

## DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
<b>Tier II Validation</b>					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment/Field blanks					X
C. Trip blanks		X	X		
Laboratory Control Sample (LCS) Accuracy (%R)		X	X		
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD Precision RPD		X		X	
Field/Laboratory Duplicate Sample RPD		X		X	
Surrogate Spike %R		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R     Percent recovery  
 RPD    Relative percent difference  
 %RSD   Relative standard deviation  
 %D     Percent difference

VALIDATION PERFORMED BY: Joseph C. Houser

SIGNATURE:



DATE: August 16, 2017

PEER REVIEW: Dennis Capria

DATE: August 22, 2017

**CHAIN OF CUSTODY/  
ANNOTATED SAMPLE ANALYSIS DATA SHEETS**

### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: <b>TB-20170801</b>	Lab ID: <b>2058632001</b>	Collected: 08/01/17 00:00	Received: 08/04/17 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	4.0	1		08/08/17 10:18	67-64-1	
Acrolein	ND	ug/L	8.0	1		08/08/17 10:18	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		08/08/17 10:18	107-13-1	
Benzene	ND	ug/L	1.0	1		08/08/17 10:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/08/17 10:18	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/08/17 10:18	75-25-2	
Bromomethane	ND	ug/L	1.0	1		08/08/17 10:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	2.0	1		08/08/17 10:18	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		08/08/17 10:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		08/08/17 10:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/08/17 10:18	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/08/17 10:18	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/08/17 10:18	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/08/17 10:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/08/17 10:18	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/08/17 10:18	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/08/17 10:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:18	10061-02-6	
Enflurane	ND	ug/L	1.0	1		08/08/17 10:18	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/08/17 10:18	100-41-4	
Haloether 229	ND	ug/L	1.0	1		08/08/17 10:18		L1
Haloether 406	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 421	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 427	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 428	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 508	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 528	ND	ug/L	1.0	1		08/08/17 10:18		
Halomar	ND	ug/L	1.0	1		08/08/17 10:18		
2-Hexanone	ND	ug/L	2.0	1		08/08/17 10:18	591-78-6	
Isoflurane	ND	ug/L	1.0	1		08/08/17 10:18		
Methoxyflurane	ND	ug/L	1.0	1		08/08/17 10:18	76-38-0	
Methylene Chloride	ND	ug/L	5.0	1		08/08/17 10:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/08/17 10:18	108-10-1	
Styrene	1.9	ug/L	1.0	1		08/08/17 10:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/08/17 10:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/08/17 10:18	127-18-4	
Toluene	ND	ug/L	1.0	1		08/08/17 10:18	108-88-3	
Total Haloether	ND	ug/L	1.0	1		08/08/17 10:18		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	79-01-6	

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: TB-20170801		Lab ID: 2058632001		Collected: 08/01/17 00:00	Received: 08/04/17 08:30	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Trichlorofluoromethane	ND	ug/L	1.0	1		08/08/17 10:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/08/17 10:18	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/08/17 10:18	76-13-1	
Vinyl chloride	ND	ug/L	1.0	1		08/08/17 10:18	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/08/17 10:18	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/08/17 10:18	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	79-119	1		08/08/17 10:18	2037-26-5	
4-Bromofluorobenzene (S)	102	%	68-124	1		08/08/17 10:18	460-00-4	
Dibromofluoromethane (S)	95	%	72-126	1		08/08/17 10:18	1868-53-7	

Sample: INF-20170801		Lab ID: 2058632002		Collected: 08/01/17 07:45	Received: 08/04/17 08:30	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	4.0	1		08/12/17 10:54	67-64-1	
Acrolein	ND	ug/L	8.0	1		08/12/17 10:54	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		08/12/17 10:54	107-13-1	
Benzene	ND	ug/L	1.0	1		08/12/17 10:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/17 10:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/12/17 10:54	75-25-2	
Bromomethane	ND	ug/L	1.0	1		08/12/17 10:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	2.0	1		08/12/17 10:54	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		08/12/17 10:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		08/12/17 10:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/17 10:54	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/17 10:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/17 10:54	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/12/17 10:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/12/17 10:54	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/12/17 10:54	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/12/17 10:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/12/17 10:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/12/17 10:54	10061-02-6	
Enflurane	1.4	ug/L	1.0	1		08/12/17 10:54	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/12/17 10:54	100-41-4	
Haloether 229	20.6	ug/L	1.0	1		08/12/17 10:54		
Haloether 406	ND	ug/L	1.0	1		08/12/17 10:54		
Haloether 421	ND	ug/L	1.0	1		08/12/17 10:54		
Haloether 427	ND	ug/L	1.0	1		08/12/17 10:54		

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: INF-20170801		Lab ID: 2058632002		Collected: 08/01/17 07:45		Received: 08/04/17 08:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260							
Haloether 428	ND	ug/L	1.0	1		08/12/17 10:54			
Haloether 508	46.9	ug/L	1.0	1		08/12/17 10:54			
Haloether 528	ND	ug/L	1.0	1		08/12/17 10:54			
Halomar	1.0	ug/L	1.0	1		08/12/17 10:54			
2-Hexanone	ND	ug/L	2.0	1		08/12/17 10:54	591-78-6		
Isoflurane	72.7	ug/L	1.0	1		08/12/17 10:54			
Methoxyflurane	ND	ug/L	1.0	1		08/12/17 10:54	76-38-0		
Methylene Chloride	ND	ug/L	5.0	1		08/12/17 10:54	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/12/17 10:54	108-10-1		
Styrene	ND	ug/L	1.0	1		08/12/17 10:54	100-42-5		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/17 10:54	79-34-5		
Tetrachloroethene	6.6	ug/L	1.0	1		08/12/17 10:54	127-18-4		
Toluene	ND	ug/L	1.0	1		08/12/17 10:54	108-88-3		
Total Haloether	143	ug/L	1.0	1		08/12/17 10:54			
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/17 10:54	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/12/17 10:54	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/17 10:54	76-13-1		
Vinyl chloride	ND	ug/L	1.0	1		08/12/17 10:54	75-01-4		
m&p-Xylene	ND	ug/L	2.0	1		08/12/17 10:54	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		08/12/17 10:54	95-47-6		
<b>Surrogates</b>									
Toluene-d8 (S)	102	%.	79-119	1		08/12/17 10:54	2037-26-5		
4-Bromofluorobenzene (S)	101	%.	68-124	1		08/12/17 10:54	460-00-4		
Dibromofluoromethane (S)	94	%.	72-126	1		08/12/17 10:54	1868-53-7		

Sample: EFF-20170801		Lab ID: 2058632003		Collected: 08/01/17 08:38		Received: 08/04/17 08:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	4.0	1		08/08/17 10:54	67-64-1		
Acrolein	ND	ug/L	8.0	1		08/08/17 10:54	107-02-8		
Acrylonitrile	ND	ug/L	4.0	1		08/08/17 10:54	107-13-1		
Benzene	ND	ug/L	1.0	1		08/08/17 10:54	71-43-2		
Bromodichloromethane	ND	ug/L	1.0	1		08/08/17 10:54	75-27-4		
Bromoform	ND	ug/L	1.0	1		08/08/17 10:54	75-25-2		
Bromomethane	ND	ug/L	1.0	1		08/08/17 10:54	74-83-9		
2-Butanone (MEK)	ND	ug/L	2.0	1		08/08/17 10:54	78-93-3		
Carbon disulfide	ND	ug/L	1.0	1		08/08/17 10:54	75-15-0		
Carbon tetrachloride	ND	ug/L	1.0	1		08/08/17 10:54	56-23-5		
Chlorobenzene	ND	ug/L	1.0	1		08/08/17 10:54	108-90-7		
Chloroethane	ND	ug/L	1.0	1		08/08/17 10:54	75-00-3		
Chloroform	ND	ug/L	1.0	1		08/08/17 10:54	67-66-3		

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: EFF-20170801	Lab ID: 2058632003	Collected: 08/01/17 08:38	Received: 08/04/17 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Chloromethane	ND	ug/L	1.0	1		08/08/17 10:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/08/17 10:54	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/08/17 10:54	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/08/17 10:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:54	10061-02-6	
Enflurane	ND	ug/L	1.0	1		08/08/17 10:54	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/08/17 10:54	100-41-4	
Haloether 229	ND	ug/L	1.0	1		08/08/17 10:54		<del>L1.M0</del>
Haloether 406	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 421	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 427	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 428	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 508	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 528	ND	ug/L	1.0	1		08/08/17 10:54		
Halomar	ND	ug/L	1.0	1		08/08/17 10:54		
2-Hexanone	ND	ug/L	2.0	1		08/08/17 10:54	591-78-6	
Isoflurane	ND	ug/L	1.0	1		08/08/17 10:54		
Methoxyflurane	ND	ug/L	1.0	1		08/08/17 10:54	76-38-0	
Methylene Chloride	ND	ug/L	5.0	1		08/08/17 10:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/08/17 10:54	108-10-1	
Styrene	<del>ND</del>	<del>ug/L</del>	<del>1.0</del>	<del>1</del>		<del>08/08/17 10:54</del>	<del>100-42-5</del>	<del>M1 R</del>
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/08/17 10:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/08/17 10:54	127-18-4	
Toluene	ND	ug/L	1.0	1		08/08/17 10:54	108-88-3	
Total Haloether	ND	ug/L	1.0	1		08/08/17 10:54		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/08/17 10:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/08/17 10:54	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/08/17 10:54	76-13-1	<del>M1</del>
Vinyl chloride	ND	ug/L	1.0	1		08/08/17 10:54	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/08/17 10:54	179601-23-1	<del>M1</del> UJ
o-Xylene	ND	ug/L	1.0	1		08/08/17 10:54	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	99	%	79-119	1		08/08/17 10:54	2037-26-5	
4-Bromofluorobenzene (S)	101	%	68-124	1		08/08/17 10:54	460-00-4	
Dibromofluoromethane (S)	93	%	72-126	1		08/08/17 10:54	1868-53-7	

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: EFF-DUP-20170801	Lab ID: 2058632004	Collected: 08/01/17 08:38	Received: 08/04/17 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	4.0	1		08/08/17 11:12	67-64-1	
Acrolein	ND	ug/L	8.0	1		08/08/17 11:12	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		08/08/17 11:12	107-13-1	
Benzene	ND	ug/L	1.0	1		08/08/17 11:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/08/17 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/08/17 11:12	75-25-2	
Bromomethane	ND	ug/L	1.0	1		08/08/17 11:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	2.0	1		08/08/17 11:12	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		08/08/17 11:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		08/08/17 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/08/17 11:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/08/17 11:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/08/17 11:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/08/17 11:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/08/17 11:12	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/08/17 11:12	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/08/17 11:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 11:12	10061-02-6	
Enflurane	ND	ug/L	1.0	1		08/08/17 11:12	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/08/17 11:12	100-41-4	
Haloether 229	ND	ug/L	1.0	1		08/08/17 11:12		-L1-
Haloether 406	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 421	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 427	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 428	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 508	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 528	ND	ug/L	1.0	1		08/08/17 11:12		
Halomar	ND	ug/L	1.0	1		08/08/17 11:12		
2-Hexanone	ND	ug/L	2.0	1		08/08/17 11:12	591-78-6	
Isoflurane	ND	ug/L	1.0	1		08/08/17 11:12		
Methoxyflurane	ND	ug/L	1.0	1		08/08/17 11:12	76-38-0	
Methylene Chloride	ND	ug/L	5.0	1		08/08/17 11:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/08/17 11:12	108-10-1	
Styrene	ND	ug/L	1.0	1		08/08/17 11:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/08/17 11:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/08/17 11:12	127-18-4	
Toluene	ND	ug/L	1.0	1		08/08/17 11:12	108-88-3	
Total Haloether	ND	ug/L	1.0	1		08/08/17 11:12		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	79-01-6	

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## ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

<b>Sample: EFF-DUP-20170801</b>		<b>Lab ID: 2058632004</b>		Collected: 08/01/17 08:38	Received: 08/04/17 08:30	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Trichlorofluoromethane	ND	ug/L	1.0	1		08/08/17 11:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/08/17 11:12	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/08/17 11:12	76-13-1	
Vinyl chloride	ND	ug/L	1.0	1		08/08/17 11:12	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/08/17 11:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/08/17 11:12	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%.	79-119	1		08/08/17 11:12	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	68-124	1		08/08/17 11:12	460-00-4	
Dibromofluoromethane (S)	93	%.	72-126	1		08/08/17 11:12	1868-53-7	

## REPORT OF LABORATORY ANALYSIS

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WO#: 2058632

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Page: 1 Of 1

**Section B**  
Required Client Information:  
Company: ARCADIS  
Address: 410 North 44th St  
Phoenix, AZ 85008  
Email: david.howard@arcadis-us.com  
Phone: NONE Fax:  
Requested Due Date:  
Project #: Fibers

**Section C**  
Invoice Info:  
Attention: David Howard  
Company Name:  
Address:  
Pace Project Manager: justin.stock@paceabs.com.  
Pace Quote:  
Pace Profile #: 1037

**Section A**  
Required Project Information:  
Report To: David Howard  
Copy To:  
Purchase Order #:  
Project Name: Fibers  
Project #:

ITEM #	MATRIX CODE One Character per box. (A-Z, 0-9, /, -) Sample ids must be unique	MATRIX TYPE (see valid codes to left) (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives H2SO4 HNO3 HCl NaOH Na2S2O3 Methanol Other	Analyzes Test Y/N	8260- VOCs + Halos Y/N	Trip BLANK Y/N	Requested Analysis: Filtered (Y/N)	Residual Chlorine (Y/N)
			START DATE	END DATE								
1	TB-20170801	WTG	08-01-17	LAB	2							
2	INF-20170801	WTG	08-01-17	0745	3							
3	EFF-20170801	WTG	08-01-17	0838	3							
4	EFF-D4P-20170801	WTG	08-01-17	0838	3							
5	EFFHS-20170801	WTG	08-01-17	0838	3							
6	EFFHSD-20170801	WTG	08-01-17	0838	3							
7												
8												
9												
10												
11												
12												

**ADDITIONAL COMMENTS**  
X W/H  
8/17/17 17:00  
FEDEx  
8/17/17 17:00  
FEDEx  
8/17/17 17:00  
FEDEx

**RELINQUISHED BY / AFFILIATION**  
FEDEx  
FEDEx  
FEDEx

**DATE**  
8/17/17  
8/17/17  
8/17/17

**TIME**  
17:00  
17:00  
17:00

**TEMP in C**  
20  
1-8  
1-8

**SAMPLE CONDITIONS**  
Y  
Y  
Y

**Received on**  
Y  
Y  
Y

**Sealed**  
Y  
Y  
Y

**Cooler**  
Y  
Y  
Y

**Intact**  
Y  
Y  
Y

**SAMPLER NAME AND SIGNATURE**  
PRINT Name of SAMPLER: Adam Colon  
SIGNATURE of SAMPLER: [Signature]

**DATE Signed:** 08/01/17

**Attachment 2**  
**Pace Laboratory Analytical Report #2058632**

August 15, 2017

David Howard  
ARCADIS  
410 North 44th St.  
Suite 1000  
Phoenix, AZ 85008

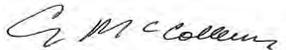
RE: Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

Dear David Howard:

Enclosed are the analytical results for sample(s) received by the laboratory on August 04, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Craig McCollum  
craig.mccollum@pacelabs.com  
504-305-3618  
Project Manager

Enclosures

cc: Janisse Diaz, Arcadis  
Gisela Hernandez Rivera, Arcadis  
Elvin Varela, ARCADIS



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

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### New Orleans Certification IDs

California Env. Lab Accreditation Program Branch:  
11277CA

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 0025721

Kansas Department of Health and Environment (NELAC):  
E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):  
02006

Pennsylvania Dept. of Env Protection (NELAC): 68-04202

Texas Commission on Env. Quality (NELAC):  
T104704405-09-TX

U.S. Dept. of Agriculture Foreign Soil Import: P330-10-  
00119

Commonwealth of Virginia (TNI): 480246

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

Lab ID	Sample ID	Matrix	Date Collected	Date Received
2058632001	TB-20170801	Water	08/01/17 00:00	08/04/17 08:30
2058632002	INF-20170801	Water	08/01/17 07:45	08/04/17 08:30
2058632003	EFF-20170801	Water	08/01/17 08:38	08/04/17 08:30
2058632004	EFF-DUP-20170801	Water	08/01/17 08:38	08/04/17 08:30

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### SAMPLE ANALYTE COUNT

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
2058632001	TB-20170801	EPA 5030B/8260	JRP	56	PASI-N
2058632002	INF-20170801	EPA 5030B/8260	JRP	56	PASI-N
2058632003	EFF-20170801	EPA 5030B/8260	JRP	56	PASI-N
2058632004	EFF-DUP-20170801	EPA 5030B/8260	JRP	56	PASI-N

### REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

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**Method:** EPA 5030B/8260

**Description:** 8260 MSV HALOETHERS

**Client:** ARCADIS

**Date:** August 15, 2017

### General Information:

4 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

### Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

### Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

### Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

### Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

### Surrogates:

All surrogates were within QC limits with any exceptions noted below.

### Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 86103

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

- LCS (Lab ID: 367281)
- Haloether 229

### Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 86103

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2058632003

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 367282)
  - Haloether 229
- MSD (Lab ID: 367283)
  - Haloether 229

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 367282)
  - 1,1,2-Trichlorotrifluoroethane

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

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**Method:** EPA 5030B/8260  
**Description:** 8260 MSV HALOETHERS  
**Client:** ARCADIS  
**Date:** August 15, 2017

QC Batch: 86103

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 2058632003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Styrene
- m&p-Xylene
- MSD (Lab ID: 367283)
  - 1,1,2-Trichlorotrifluoroethane
  - Styrene
  - m&p-Xylene

QC Batch: 86407

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

### Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: <b>TB-20170801</b>	Lab ID: <b>2058632001</b>	Collected: 08/01/17 00:00	Received: 08/04/17 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	4.0	1		08/08/17 10:18	67-64-1	
Acrolein	ND	ug/L	8.0	1		08/08/17 10:18	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		08/08/17 10:18	107-13-1	
Benzene	ND	ug/L	1.0	1		08/08/17 10:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/08/17 10:18	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/08/17 10:18	75-25-2	
Bromomethane	ND	ug/L	1.0	1		08/08/17 10:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	2.0	1		08/08/17 10:18	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		08/08/17 10:18	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		08/08/17 10:18	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/08/17 10:18	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/08/17 10:18	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/08/17 10:18	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/08/17 10:18	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/08/17 10:18	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/08/17 10:18	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/08/17 10:18	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:18	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:18	10061-02-6	
Enflurane	ND	ug/L	1.0	1		08/08/17 10:18	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/08/17 10:18	100-41-4	
Haloether 229	ND	ug/L	1.0	1		08/08/17 10:18		L1
Haloether 406	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 421	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 427	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 428	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 508	ND	ug/L	1.0	1		08/08/17 10:18		
Haloether 528	ND	ug/L	1.0	1		08/08/17 10:18		
Halomar	ND	ug/L	1.0	1		08/08/17 10:18		
2-Hexanone	ND	ug/L	2.0	1		08/08/17 10:18	591-78-6	
Isoflurane	ND	ug/L	1.0	1		08/08/17 10:18		
Methoxyflurane	ND	ug/L	1.0	1		08/08/17 10:18	76-38-0	
Methylene Chloride	ND	ug/L	5.0	1		08/08/17 10:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/08/17 10:18	108-10-1	
Styrene	<b>1.9</b>	ug/L	1.0	1		08/08/17 10:18	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/08/17 10:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/08/17 10:18	127-18-4	
Toluene	ND	ug/L	1.0	1		08/08/17 10:18	108-88-3	
Total Haloether	ND	ug/L	1.0	1		08/08/17 10:18		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/08/17 10:18	79-01-6	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: TB-20170801		Lab ID: 2058632001		Collected: 08/01/17 00:00	Received: 08/04/17 08:30	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Trichlorofluoromethane	ND	ug/L	1.0	1		08/08/17 10:18	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/08/17 10:18	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/08/17 10:18	76-13-1	
Vinyl chloride	ND	ug/L	1.0	1		08/08/17 10:18	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/08/17 10:18	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/08/17 10:18	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	102	%	79-119	1		08/08/17 10:18	2037-26-5	
4-Bromofluorobenzene (S)	102	%	68-124	1		08/08/17 10:18	460-00-4	
Dibromofluoromethane (S)	95	%	72-126	1		08/08/17 10:18	1868-53-7	

Sample: INF-20170801		Lab ID: 2058632002		Collected: 08/01/17 07:45	Received: 08/04/17 08:30	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	4.0	1		08/12/17 10:54	67-64-1	
Acrolein	ND	ug/L	8.0	1		08/12/17 10:54	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		08/12/17 10:54	107-13-1	
Benzene	ND	ug/L	1.0	1		08/12/17 10:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/12/17 10:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/12/17 10:54	75-25-2	
Bromomethane	ND	ug/L	1.0	1		08/12/17 10:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	2.0	1		08/12/17 10:54	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		08/12/17 10:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		08/12/17 10:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/12/17 10:54	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/12/17 10:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/12/17 10:54	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/12/17 10:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/12/17 10:54	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/12/17 10:54	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/12/17 10:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/12/17 10:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/12/17 10:54	10061-02-6	
Enflurane	1.4	ug/L	1.0	1		08/12/17 10:54	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/12/17 10:54	100-41-4	
Haloether 229	20.6	ug/L	1.0	1		08/12/17 10:54		
Haloether 406	ND	ug/L	1.0	1		08/12/17 10:54		
Haloether 421	ND	ug/L	1.0	1		08/12/17 10:54		
Haloether 427	ND	ug/L	1.0	1		08/12/17 10:54		

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: INF-20170801		Lab ID: 2058632002		Collected: 08/01/17 07:45		Received: 08/04/17 08:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260							
Haloether 428	ND	ug/L	1.0	1		08/12/17 10:54			
Haloether 508	46.9	ug/L	1.0	1		08/12/17 10:54			
Haloether 528	ND	ug/L	1.0	1		08/12/17 10:54			
Halomar	1.0	ug/L	1.0	1		08/12/17 10:54			
2-Hexanone	ND	ug/L	2.0	1		08/12/17 10:54	591-78-6		
Isoflurane	72.7	ug/L	1.0	1		08/12/17 10:54			
Methoxyflurane	ND	ug/L	1.0	1		08/12/17 10:54	76-38-0		
Methylene Chloride	ND	ug/L	5.0	1		08/12/17 10:54	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/12/17 10:54	108-10-1		
Styrene	ND	ug/L	1.0	1		08/12/17 10:54	100-42-5		
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/12/17 10:54	79-34-5		
Tetrachloroethene	6.6	ug/L	1.0	1		08/12/17 10:54	127-18-4		
Toluene	ND	ug/L	1.0	1		08/12/17 10:54	108-88-3		
Total Haloether	143	ug/L	1.0	1		08/12/17 10:54			
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	71-55-6		
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/12/17 10:54	79-00-5		
Trichloroethene	ND	ug/L	1.0	1		08/12/17 10:54	79-01-6		
Trichlorofluoromethane	ND	ug/L	1.0	1		08/12/17 10:54	75-69-4		
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/12/17 10:54	96-18-4		
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/12/17 10:54	76-13-1		
Vinyl chloride	ND	ug/L	1.0	1		08/12/17 10:54	75-01-4		
m&p-Xylene	ND	ug/L	2.0	1		08/12/17 10:54	179601-23-1		
o-Xylene	ND	ug/L	1.0	1		08/12/17 10:54	95-47-6		
<b>Surrogates</b>									
Toluene-d8 (S)	102	%.	79-119	1		08/12/17 10:54	2037-26-5		
4-Bromofluorobenzene (S)	101	%.	68-124	1		08/12/17 10:54	460-00-4		
Dibromofluoromethane (S)	94	%.	72-126	1		08/12/17 10:54	1868-53-7		

Sample: EFF-20170801		Lab ID: 2058632003		Collected: 08/01/17 08:38		Received: 08/04/17 08:30		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	4.0	1		08/08/17 10:54	67-64-1		
Acrolein	ND	ug/L	8.0	1		08/08/17 10:54	107-02-8		
Acrylonitrile	ND	ug/L	4.0	1		08/08/17 10:54	107-13-1		
Benzene	ND	ug/L	1.0	1		08/08/17 10:54	71-43-2		
Bromodichloromethane	ND	ug/L	1.0	1		08/08/17 10:54	75-27-4		
Bromoform	ND	ug/L	1.0	1		08/08/17 10:54	75-25-2		
Bromomethane	ND	ug/L	1.0	1		08/08/17 10:54	74-83-9		
2-Butanone (MEK)	ND	ug/L	2.0	1		08/08/17 10:54	78-93-3		
Carbon disulfide	ND	ug/L	1.0	1		08/08/17 10:54	75-15-0		
Carbon tetrachloride	ND	ug/L	1.0	1		08/08/17 10:54	56-23-5		
Chlorobenzene	ND	ug/L	1.0	1		08/08/17 10:54	108-90-7		
Chloroethane	ND	ug/L	1.0	1		08/08/17 10:54	75-00-3		
Chloroform	ND	ug/L	1.0	1		08/08/17 10:54	67-66-3		

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: EFF-20170801	Lab ID: 2058632003	Collected: 08/01/17 08:38	Received: 08/04/17 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Chloromethane	ND	ug/L	1.0	1		08/08/17 10:54	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/08/17 10:54	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/08/17 10:54	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/08/17 10:54	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 10:54	10061-02-6	
Enflurane	ND	ug/L	1.0	1		08/08/17 10:54	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/08/17 10:54	100-41-4	
Haloether 229	ND	ug/L	1.0	1		08/08/17 10:54		L1,M0
Haloether 406	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 421	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 427	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 428	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 508	ND	ug/L	1.0	1		08/08/17 10:54		
Haloether 528	ND	ug/L	1.0	1		08/08/17 10:54		
Halomar	ND	ug/L	1.0	1		08/08/17 10:54		
2-Hexanone	ND	ug/L	2.0	1		08/08/17 10:54	591-78-6	
Isoflurane	ND	ug/L	1.0	1		08/08/17 10:54		
Methoxyflurane	ND	ug/L	1.0	1		08/08/17 10:54	76-38-0	
Methylene Chloride	ND	ug/L	5.0	1		08/08/17 10:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/08/17 10:54	108-10-1	
Styrene	ND	ug/L	1.0	1		08/08/17 10:54	100-42-5	M1
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/08/17 10:54	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/08/17 10:54	127-18-4	
Toluene	ND	ug/L	1.0	1		08/08/17 10:54	108-88-3	
Total Haloether	ND	ug/L	1.0	1		08/08/17 10:54		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/08/17 10:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/08/17 10:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/08/17 10:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/08/17 10:54	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/08/17 10:54	76-13-1	M1
Vinyl chloride	ND	ug/L	1.0	1		08/08/17 10:54	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/08/17 10:54	179601-23-1	M1
o-Xylene	ND	ug/L	1.0	1		08/08/17 10:54	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	99	%.	79-119	1		08/08/17 10:54	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	68-124	1		08/08/17 10:54	460-00-4	
Dibromofluoromethane (S)	93	%.	72-126	1		08/08/17 10:54	1868-53-7	

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### ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

Sample: EFF-DUP-20170801	Lab ID: 2058632004	Collected: 08/01/17 08:38	Received: 08/04/17 08:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	4.0	1		08/08/17 11:12	67-64-1	
Acrolein	ND	ug/L	8.0	1		08/08/17 11:12	107-02-8	
Acrylonitrile	ND	ug/L	4.0	1		08/08/17 11:12	107-13-1	
Benzene	ND	ug/L	1.0	1		08/08/17 11:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/08/17 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/08/17 11:12	75-25-2	
Bromomethane	ND	ug/L	1.0	1		08/08/17 11:12	74-83-9	
2-Butanone (MEK)	ND	ug/L	2.0	1		08/08/17 11:12	78-93-3	
Carbon disulfide	ND	ug/L	1.0	1		08/08/17 11:12	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		08/08/17 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/08/17 11:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/08/17 11:12	75-00-3	
Chloroform	ND	ug/L	1.0	1		08/08/17 11:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/08/17 11:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/08/17 11:12	124-48-1	
Dibromomethane	ND	ug/L	1.0	1		08/08/17 11:12	74-95-3	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/08/17 11:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/08/17 11:12	10061-02-6	
Enflurane	ND	ug/L	1.0	1		08/08/17 11:12	13838-16-9	
Ethylbenzene	ND	ug/L	1.0	1		08/08/17 11:12	100-41-4	
Haloether 229	ND	ug/L	1.0	1		08/08/17 11:12		L1
Haloether 406	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 421	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 427	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 428	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 508	ND	ug/L	1.0	1		08/08/17 11:12		
Haloether 528	ND	ug/L	1.0	1		08/08/17 11:12		
Halomar	ND	ug/L	1.0	1		08/08/17 11:12		
2-Hexanone	ND	ug/L	2.0	1		08/08/17 11:12	591-78-6	
Isoflurane	ND	ug/L	1.0	1		08/08/17 11:12		
Methoxyflurane	ND	ug/L	1.0	1		08/08/17 11:12	76-38-0	
Methylene Chloride	ND	ug/L	5.0	1		08/08/17 11:12	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2.0	1		08/08/17 11:12	108-10-1	
Styrene	ND	ug/L	1.0	1		08/08/17 11:12	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/08/17 11:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/08/17 11:12	127-18-4	
Toluene	ND	ug/L	1.0	1		08/08/17 11:12	108-88-3	
Total Haloether	ND	ug/L	1.0	1		08/08/17 11:12		
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/08/17 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/08/17 11:12	79-01-6	

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## ANALYTICAL RESULTS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

<b>Sample: EFF-DUP-20170801</b>		<b>Lab ID: 2058632004</b>		Collected: 08/01/17 08:38	Received: 08/04/17 08:30	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV HALOETHERS</b>		Analytical Method: EPA 5030B/8260						
Trichlorofluoromethane	ND	ug/L	1.0	1		08/08/17 11:12	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	1		08/08/17 11:12	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	1		08/08/17 11:12	76-13-1	
Vinyl chloride	ND	ug/L	1.0	1		08/08/17 11:12	75-01-4	
m&p-Xylene	ND	ug/L	2.0	1		08/08/17 11:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	1		08/08/17 11:12	95-47-6	
<b>Surrogates</b>								
Toluene-d8 (S)	100	%.	79-119	1		08/08/17 11:12	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	68-124	1		08/08/17 11:12	460-00-4	
Dibromofluoromethane (S)	93	%.	72-126	1		08/08/17 11:12	1868-53-7	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

QC Batch: 86103 Analysis Method: EPA 5030B/8260  
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 2058632001, 2058632003, 2058632004

METHOD BLANK: 367280 Matrix: Water

Associated Lab Samples: 2058632001, 2058632003, 2058632004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	08/08/17 08:50	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/08/17 08:50	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/08/17 08:50	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/08/17 08:50	
1,1-Dichloroethane	ug/L	ND	1.0	08/08/17 08:50	
1,1-Dichloroethene	ug/L	ND	1.0	08/08/17 08:50	
1,2,3-Trichloropropane	ug/L	ND	1.0	08/08/17 08:50	
1,2-Dichloroethane	ug/L	ND	1.0	08/08/17 08:50	
1,2-Dichloropropane	ug/L	ND	1.0	08/08/17 08:50	
2-Butanone (MEK)	ug/L	ND	2.0	08/08/17 08:50	
2-Hexanone	ug/L	ND	2.0	08/08/17 08:50	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	2.0	08/08/17 08:50	
Acetone	ug/L	ND	4.0	08/08/17 08:50	
Acrolein	ug/L	ND	8.0	08/08/17 08:50	
Acrylonitrile	ug/L	ND	4.0	08/08/17 08:50	
Benzene	ug/L	ND	1.0	08/08/17 08:50	
Bromodichloromethane	ug/L	ND	1.0	08/08/17 08:50	
Bromoform	ug/L	ND	1.0	08/08/17 08:50	
Bromomethane	ug/L	ND	1.0	08/08/17 08:50	
Carbon disulfide	ug/L	ND	1.0	08/08/17 08:50	
Carbon tetrachloride	ug/L	ND	1.0	08/08/17 08:50	
Chlorobenzene	ug/L	ND	1.0	08/08/17 08:50	
Chloroethane	ug/L	ND	1.0	08/08/17 08:50	
Chloroform	ug/L	ND	1.0	08/08/17 08:50	
Chloromethane	ug/L	ND	1.0	08/08/17 08:50	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/08/17 08:50	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/08/17 08:50	
Dibromochloromethane	ug/L	ND	1.0	08/08/17 08:50	
Dibromomethane	ug/L	ND	1.0	08/08/17 08:50	
Enflurane	ug/L	ND	1.0	08/08/17 08:50	
Ethylbenzene	ug/L	ND	1.0	08/08/17 08:50	
Haloether 229	ug/L	ND	1.0	08/08/17 08:50	
Haloether 406	ug/L	ND	1.0	08/08/17 08:50	
Haloether 421	ug/L	ND	1.0	08/08/17 08:50	
Haloether 427	ug/L	ND	1.0	08/08/17 08:50	
Haloether 428	ug/L	ND	1.0	08/08/17 08:50	
Haloether 508	ug/L	ND	1.0	08/08/17 08:50	
Haloether 528	ug/L	ND	1.0	08/08/17 08:50	
Halomar	ug/L	ND	1.0	08/08/17 08:50	
Isoflurane	ug/L	ND	1.0	08/08/17 08:50	
m&p-Xylene	ug/L	ND	2.0	08/08/17 08:50	

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

METHOD BLANK: 367280 Matrix: Water  
Associated Lab Samples: 2058632001, 2058632003, 2058632004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methoxyflurane	ug/L	ND	1.0	08/08/17 08:50	
Methylene Chloride	ug/L	ND	5.0	08/08/17 08:50	
o-Xylene	ug/L	ND	1.0	08/08/17 08:50	
Styrene	ug/L	ND	1.0	08/08/17 08:50	
Tetrachloroethene	ug/L	ND	1.0	08/08/17 08:50	
Toluene	ug/L	ND	1.0	08/08/17 08:50	
Total Haloether	ug/L	ND	1.0	08/08/17 08:50	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/08/17 08:50	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/08/17 08:50	
Trichloroethene	ug/L	ND	1.0	08/08/17 08:50	
Trichlorofluoromethane	ug/L	ND	1.0	08/08/17 08:50	
Vinyl chloride	ug/L	ND	1.0	08/08/17 08:50	
4-Bromofluorobenzene (S)	%	101	68-124	08/08/17 08:50	
Dibromofluoromethane (S)	%	94	72-126	08/08/17 08:50	
Toluene-d8 (S)	%	101	79-119	08/08/17 08:50	

LABORATORY CONTROL SAMPLE: 367281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.2	96	62-131	
1,1,2,2-Tetrachloroethane	ug/L	50	50.1	100	15-179	
1,1,2-Trichloroethane	ug/L	50	50.8	102	58-144	
1,1,2-Trichlorotrifluoroethane	ug/L	50	43.2	86	38-121	
1,1-Dichloroethane	ug/L	50	48.2	96	63-129	
1,1-Dichloroethene	ug/L	50	43.4	87	51-139	
1,2,3-Trichloropropane	ug/L	50	51.2	102	13-187	
1,2-Dichloroethane	ug/L	50	49.6	99	57-148	
1,2-Dichloropropane	ug/L	50	52.9	106	66-128	
2-Butanone (MEK)	ug/L	50	51.0	102	32-183	
2-Hexanone	ug/L	50	57.4	115	36-170	
4-Methyl-2-pentanone (MIBK)	ug/L	50	54.5	109	26-171	
Acetone	ug/L	50	48.0	96	22-165	
Acrolein	ug/L	100	123	123	10-131	
Acrylonitrile	ug/L	50	49.1	98	18-149	
Benzene	ug/L	50	42.8	86	62-131	
Bromodichloromethane	ug/L	50	50.9	102	69-132	
Bromoform	ug/L	50	47.0	94	35-166	
Bromomethane	ug/L	50	44.1	88	34-158	
Carbon disulfide	ug/L	50	47.2	94	31-128	
Carbon tetrachloride	ug/L	50	48.1	96	54-144	
Chlorobenzene	ug/L	50	48.4	97	70-127	
Chloroethane	ug/L	50	50.4	101	17-195	
Chloroform	ug/L	50	47.5	95	73-134	
Chloromethane	ug/L	50	50.1	100	17-153	

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

LABORATORY CONTROL SAMPLE: 367281

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	44.4	89	68-129	
cis-1,3-Dichloropropene	ug/L	50	53.1	106	72-138	
Dibromochloromethane	ug/L	50	51.1	102	49-146	
Dibromomethane	ug/L	50	48.6	97	56-145	
Enflurane	ug/L	50	42.8	86	56-135	
Ethylbenzene	ug/L	50	47.6	95	66-126	
Haloether 229	ug/L	50	61.9	124	62-123	L1
Haloether 406	ug/L	50	46.4	93	62-134	
Haloether 421	ug/L	50	52.6	105	70-128	
Haloether 427	ug/L	50	39.3	79	69-153	
Haloether 428	ug/L	50	42.9	86	70-134	
Haloether 508	ug/L	50	41.3	83	52-139	
Haloether 528	ug/L	50	37.5	75	48-157	
Halomar	ug/L	50	48.7	97	62-128	
Isoflurane	ug/L	50	44.8	90	61-132	
m&p-Xylene	ug/L	100	101	101	65-129	
Methoxyflurane	ug/L	50	50.5	101	72-124	
Methylene Chloride	ug/L	50	45.8	92	46-168	
o-Xylene	ug/L	50	46.4	93	65-124	
Styrene	ug/L	50	50.3	101	72-133	
Tetrachloroethene	ug/L	50	47.8	96	46-157	
Toluene	ug/L	50	48.6	97	69-126	
Total Haloether	ug/L		509			
trans-1,2-Dichloroethene	ug/L	50	44.8	90	60-129	
trans-1,3-Dichloropropene	ug/L	50	54.3	109	59-149	
Trichloroethene	ug/L	50	49.7	99	67-132	
Trichlorofluoromethane	ug/L	50	46.2	92	39-171	
Vinyl chloride	ug/L	50	50.5	101	27-149	
4-Bromofluorobenzene (S)	%			99	68-124	
Dibromofluoromethane (S)	%			94	72-126	
Toluene-d8 (S)	%			100	79-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 367282 367283

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		2058632003 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1,1,1-Trichloroethane	ug/L	ND	50	50	58.7	57.3	117	115	54-137	2	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	50	50	54.4	55.3	109	111	15-187	2	20	
1,1,2-Trichloroethane	ug/L	ND	50	50	53.9	52.7	108	105	59-148	2	20	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	50	50	62.8	63.5	126	127	40-117	1	20	M1
1,1-Dichloroethane	ug/L	ND	50	50	53.3	52.5	107	105	59-133	2	20	
1,1-Dichloroethene	ug/L	ND	50	50	57.7	56.7	115	113	44-146	2	20	
1,2,3-Trichloropropane	ug/L	ND	50	50	50.5	52.4	101	105	14-199	4	20	
1,2-Dichloroethane	ug/L	ND	50	50	53.1	52.6	106	105	56-154	1	20	
1,2-Dichloropropane	ug/L	ND	50	50	59.6	57.6	119	115	62-135	3	20	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells

Project No.: 2058632

Parameter	Units	2058632003		367282		367283		% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
2-Butanone (MEK)	ug/L	ND	50	50	51.9	53.1	104	106	20-205	2	20		
2-Hexanone	ug/L	ND	50	50	62.6	62.1	125	124	25-189	1	20		
4-Methyl-2-pentanone (MIBK)	ug/L	ND	50	50	59.2	58.4	118	117	23-184	1	20		
Acetone	ug/L	ND	50	50	50.3	53.4	101	107	11-217	6	20		
Acrolein	ug/L	ND	100	100	72.3	67.6	72	68	10-142	7	20		
Acrylonitrile	ug/L	ND	50	50	49.5	49.9	99	100	20-164	1	20		
Benzene	ug/L	ND	50	50	50.4	49.8	101	100	52-141	1	20		
Bromodichloromethane	ug/L	ND	50	50	56.6	54.0	113	108	70-134	5	20		
Bromoform	ug/L	ND	50	50	49.2	50.0	98	100	37-171	2	20		
Bromomethane	ug/L	ND	50	50	52.0	50.3	104	101	34-155	3	20		
Carbon disulfide	ug/L	ND	50	50	60.8	53.9	122	108	28-130	12	20		
Carbon tetrachloride	ug/L	ND	50	50	61.5	61.3	123	123	48-146	0	20		
Chlorobenzene	ug/L	ND	50	50	52.3	52.6	105	105	67-129	1	20		
Chloroethane	ug/L	ND	50	50	58.4	56.4	117	113	12-192	4	20		
Chloroform	ug/L	ND	50	50	52.9	51.4	106	103	66-143	3	20		
Chloromethane	ug/L	ND	50	50	71.1	69.3	142	139	14-155	3	20		
cis-1,2-Dichloroethene	ug/L	ND	50	50	51.8	50.6	104	101	56-141	2	20		
cis-1,3-Dichloropropene	ug/L	ND	50	50	57.2	55.3	114	111	70-139	3	20		
Dibromochloromethane	ug/L	ND	50	50	55.0	56.6	110	113	50-150	3	20		
Dibromomethane	ug/L	ND	50	50	54.2	53.5	108	107	58-153	1	20		
Enflurane	ug/L	ND	50	50	50.6	50.7	101	101	63-126	0	20		
Ethylbenzene	ug/L	ND	50	50	53.1	53.4	106	107	57-135	0	20		
Haloether 229	ug/L	ND	50	50	77.4	78.6	155	157	56-127	2	20	M0	
Haloether 406	ug/L	ND	50	50	59.1	58.4	118	117	68-128	1	20		
Haloether 421	ug/L	ND	50	50	59.8	57.5	120	115	74-120	4	20		
Haloether 427	ug/L	ND	50	50	49.5	48.4	99	97	78-120	2	20		
Haloether 428	ug/L	ND	50	50	54.5	53.2	109	106	74-125	2	20		
Haloether 508	ug/L	ND	50	50	57.5	55.9	115	112	28-156	3	20		
Haloether 528	ug/L	ND	50	50	43.4	42.4	87	85	45-142	2	20		
Halomar	ug/L	ND	50	50	54.7	54.2	109	108	67-123	1	20		
Isoflurane	ug/L	ND	50	50	54.3	52.8	109	106	45-140	3	20		
m&p-Xylene	ug/L	ND	100	100	51.3	50.4	51	50	56-136	2	20	M1	
Methoxyflurane	ug/L	ND	50	50	54.5	52.8	109	106	75-119	3	20		
Methylene Chloride	ug/L	ND	50	50	50.5	49.2	101	98	45-166	3	20		
o-Xylene	ug/L	ND	50	50	47.7	47.4	95	95	57-133	0	20		
Styrene	ug/L	ND	50	50	ND	1.6	0	3	58-144		20	M1	
Tetrachloroethene	ug/L	ND	50	50	54.4	54.2	109	108	48-143	0	20		
Toluene	ug/L	ND	50	50	55.0	52.7	110	105	59-136	4	20		
Total Haloether	ug/L	ND			615	605				2			
trans-1,2-Dichloroethene	ug/L	ND	50	50	54.4	52.1	109	104	57-132	4	20		
trans-1,3-Dichloropropene	ug/L	ND	50	50	57.5	56.9	115	114	59-154	1	20		
Trichloroethene	ug/L	ND	50	50	59.6	57.1	119	114	58-140	4	20		
Trichlorofluoromethane	ug/L	ND	50	50	61.2	61.2	122	122	24-175	0	20		
Vinyl chloride	ug/L	ND	50	50	57.9	55.3	116	111	21-150	5	20		
4-Bromofluorobenzene (S)	%						99	99	68-124				

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		367282		367283									
Parameter	Units	2058632003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Dibromofluoromethane (S)	%.						94	94	72-126				
Toluene-d8 (S)	%.						100	99	79-119				

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

QC Batch: 86407 Analysis Method: EPA 5030B/8260  
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV  
Associated Lab Samples: 2058632002

METHOD BLANK: 368899 Matrix: Water  
Associated Lab Samples: 2058632002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	08/12/17 10:00	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/12/17 10:00	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/12/17 10:00	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	08/12/17 10:00	
1,1-Dichloroethane	ug/L	ND	1.0	08/12/17 10:00	
1,1-Dichloroethene	ug/L	ND	1.0	08/12/17 10:00	
1,2,3-Trichloropropane	ug/L	ND	1.0	08/12/17 10:00	
1,2-Dichloroethane	ug/L	ND	1.0	08/12/17 10:00	
1,2-Dichloropropane	ug/L	ND	1.0	08/12/17 10:00	
2-Butanone (MEK)	ug/L	ND	2.0	08/12/17 10:00	
2-Hexanone	ug/L	ND	2.0	08/12/17 10:00	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	2.0	08/12/17 10:00	
Acetone	ug/L	ND	4.0	08/12/17 10:00	
Acrolein	ug/L	ND	8.0	08/12/17 10:00	
Acrylonitrile	ug/L	ND	4.0	08/12/17 10:00	
Benzene	ug/L	ND	1.0	08/12/17 10:00	
Bromodichloromethane	ug/L	ND	1.0	08/12/17 10:00	
Bromoform	ug/L	ND	1.0	08/12/17 10:00	
Bromomethane	ug/L	ND	1.0	08/12/17 10:00	
Carbon disulfide	ug/L	ND	1.0	08/12/17 10:00	
Carbon tetrachloride	ug/L	ND	1.0	08/12/17 10:00	
Chlorobenzene	ug/L	ND	1.0	08/12/17 10:00	
Chloroethane	ug/L	ND	1.0	08/12/17 10:00	
Chloroform	ug/L	ND	1.0	08/12/17 10:00	
Chloromethane	ug/L	ND	1.0	08/12/17 10:00	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/12/17 10:00	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/12/17 10:00	
Dibromochloromethane	ug/L	ND	1.0	08/12/17 10:00	
Dibromomethane	ug/L	ND	1.0	08/12/17 10:00	
Enflurane	ug/L	ND	1.0	08/12/17 10:00	
Ethylbenzene	ug/L	ND	1.0	08/12/17 10:00	
Haloether 229	ug/L	ND	1.0	08/12/17 10:00	
Haloether 406	ug/L	ND	1.0	08/12/17 10:00	
Haloether 421	ug/L	ND	1.0	08/12/17 10:00	
Haloether 427	ug/L	ND	1.0	08/12/17 10:00	
Haloether 428	ug/L	ND	1.0	08/12/17 10:00	
Haloether 508	ug/L	ND	1.0	08/12/17 10:00	
Haloether 528	ug/L	ND	1.0	08/12/17 10:00	
Halomar	ug/L	ND	1.0	08/12/17 10:00	
Isoflurane	ug/L	ND	1.0	08/12/17 10:00	
m&p-Xylene	ug/L	ND	2.0	08/12/17 10:00	

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

METHOD BLANK: 368899

Matrix: Water

Associated Lab Samples: 2058632002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methoxyflurane	ug/L	ND	1.0	08/12/17 10:00	
Methylene Chloride	ug/L	ND	5.0	08/12/17 10:00	
o-Xylene	ug/L	ND	1.0	08/12/17 10:00	
Styrene	ug/L	ND	1.0	08/12/17 10:00	
Tetrachloroethene	ug/L	ND	1.0	08/12/17 10:00	
Toluene	ug/L	ND	1.0	08/12/17 10:00	
Total Haloether	ug/L	ND	1.0	08/12/17 10:00	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/12/17 10:00	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/12/17 10:00	
Trichloroethene	ug/L	ND	1.0	08/12/17 10:00	
Trichlorofluoromethane	ug/L	ND	1.0	08/12/17 10:00	
Vinyl chloride	ug/L	ND	1.0	08/12/17 10:00	
4-Bromofluorobenzene (S)	%	101	68-124	08/12/17 10:00	
Dibromofluoromethane (S)	%	95	72-126	08/12/17 10:00	
Toluene-d8 (S)	%	101	79-119	08/12/17 10:00	

LABORATORY CONTROL SAMPLE: 368900

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	48.8	98	62-131	
1,1,2,2-Tetrachloroethane	ug/L	50	55.7	111	15-179	
1,1,2-Trichloroethane	ug/L	50	51.8	104	58-144	
1,1,2-Trichlorotrifluoroethane	ug/L	50	43.0	86	38-121	
1,1-Dichloroethane	ug/L	50	48.8	98	63-129	
1,1-Dichloroethene	ug/L	50	46.3	93	51-139	
1,2,3-Trichloropropane	ug/L	50	54.1	108	13-187	
1,2-Dichloroethane	ug/L	50	50.2	100	57-148	
1,2-Dichloropropane	ug/L	50	55.3	111	66-128	
2-Butanone (MEK)	ug/L	50	57.3	115	32-183	
2-Hexanone	ug/L	50	66.0	132	36-170	
4-Methyl-2-pentanone (MIBK)	ug/L	50	63.1	126	26-171	
Acetone	ug/L	50	50.8	102	22-165	
Acrolein	ug/L	100	93.0	93	10-131	
Acrylonitrile	ug/L	50	52.1	104	18-149	
Benzene	ug/L	50	44.8	90	62-131	
Bromodichloromethane	ug/L	50	51.4	103	69-132	
Bromoform	ug/L	50	48.8	98	35-166	
Bromomethane	ug/L	50	43.8	88	34-158	
Carbon disulfide	ug/L	50	47.6	95	31-128	
Carbon tetrachloride	ug/L	50	48.2	96	54-144	
Chlorobenzene	ug/L	50	48.9	98	70-127	
Chloroethane	ug/L	50	48.3	97	17-195	
Chloroform	ug/L	50	47.0	94	73-134	
Chloromethane	ug/L	50	51.4	103	17-153	

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### QUALITY CONTROL DATA

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

LABORATORY CONTROL SAMPLE: 368900

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	45.4	91	68-129	
cis-1,3-Dichloropropene	ug/L	50	53.3	107	72-138	
Dibromochloromethane	ug/L	50	53.1	106	49-146	
Dibromomethane	ug/L	50	50.4	101	56-145	
Enflurane	ug/L	50	46.4	93	56-135	
Ethylbenzene	ug/L	50	50.8	102	66-126	
Haloether 229	ug/L	50	45.4	91	62-123	
Haloether 406	ug/L	50	42.7	85	62-134	
Haloether 421	ug/L	50	50.1	100	70-128	
Haloether 427	ug/L	50	46.1	92	69-153	
Haloether 428	ug/L	50	46.6	93	70-134	
Haloether 508	ug/L	50	53.3	107	52-139	
Haloether 528	ug/L	50	55.1	110	48-157	
Halomar	ug/L	50	48.3	97	62-128	
Isoflurane	ug/L	50	47.6	95	61-132	
m&p-Xylene	ug/L	100	106	106	65-129	
Methoxyflurane	ug/L	50	51.4	103	72-124	
Methylene Chloride	ug/L	50	46.9	94	46-168	
o-Xylene	ug/L	50	48.6	97	65-124	
Styrene	ug/L	50	52.0	104	72-133	
Tetrachloroethene	ug/L	50	46.2	92	46-157	
Toluene	ug/L	50	49.9	100	69-126	
Total Haloether	ug/L		533			
trans-1,2-Dichloroethene	ug/L	50	45.0	90	60-129	
trans-1,3-Dichloropropene	ug/L	50	56.4	113	59-149	
Trichloroethene	ug/L	50	49.8	100	67-132	
Trichlorofluoromethane	ug/L	50	41.9	84	39-171	
Vinyl chloride	ug/L	50	47.9	96	27-149	
4-Bromofluorobenzene (S)	%			95	68-124	
Dibromofluoromethane (S)	%			91	72-126	
Toluene-d8 (S)	%			99	79-119	

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## QUALIFIERS

Project: Fibers Public Supply Wells

Pace Project No.: 2058632

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The Nelac Institute

### LABORATORIES

PASI-N Pace Analytical Services - New Orleans

### BATCH QUALIFIERS

Batch: 86407

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results for this analyte in associated samples may be biased high.

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Fibers Public Supply Wells  
Pace Project No.: 2058632

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
2058632001	TB-20170801	EPA 5030B/8260	86103		
2058632002	INF-20170801	EPA 5030B/8260	86407		
2058632003	EFF-20170801	EPA 5030B/8260	86103		
2058632004	EFF-DUP-20170801	EPA 5030B/8260	86103		

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WO#: 2058632

CHAIN-OF-CUSTODY

The Chain-of-Custody is a l

rately.

**Section A**  
**Required Client Information:**  
 Company: ARCADIS  
 Address: 410 North 44th St  
 Phoenix, AZ 85008  
 Email: david.howard@arcadis-us.com  
 Phone: NONE Fax:  
 Requested Due Date:

**Section B**  
**Required Project Information:**  
 Report To: David Howard  
 Copy To:  
 Purchase Order #: Fibers  
 Project Name: Fibers  
 Project #:

**Section C**  
**Invoice Info:**  
 Attention:  
 Company Name:  
 Address:  
 Pace Project Manager: justin.stock@pacelabs.com.  
 Pace Quote:  
 Pace Profile #: 1037

**Regulatory Agency:**  
**State/Location:**  
 PR

ITEM #	MATRIX CODE (see valid codes to left)	MATRIX TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analytes Test	Residual Chlorine (Y/N)
			START DATE	END DATE					
1	TB-20170801	WTG	08-01-17	LAB	2		HCl	X	X
2	INF-20170801	WTG	08-01-17	0745	3		HCl	X	X
3	EFF-20170801	WTG	08-01-17	0838	3		HCl	X	X
4	EFF-D4P-20170801	WTG	08-01-17	0838	3		HCl	X	X
5	EFFHS-20170801	WTG	08-01-17	0838	3		HCl	X	X
6	EFFHSD-20170801	WTG	08-01-17	0838	3		HCl	X	X
7									
8									
9									
10									
11									
12									

**ADDITIONAL COMMENTS**

RELINQUISHED BY (AFFILIATION): *FEDER* DATE: 8/17/17 TIME: 17:00

RELINQUISHED BY (AFFILIATION): *FEDER* DATE: 8/17/17 TIME: 17:00

RECEIVED ON: 8/17/17 TEMP in C: 1-8

COOLING (Y/N): *Y*

SEALING (Y/N): *Y*

CUSTODY (Y/N): *Y*

SAMPLES INTACT (Y/N): *Y*

SAMPLER NAME AND SIGNATURE: *Adam Colon*

PRINT Name of SAMPLER: *Adam Colon*

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed: 08/01/17



1000 Riverbend Blvd., Suite F  
St. Rose, LA 70087

### Sample Condition Upon Receipt

# WO#: 2058632

PM: CJM

Due Date: 08/18/17

CLIENT: 20-CHEV-ARC

Project: \_\_\_\_\_

Courier:  Pace Courier  Hired Courier  Fed X  UPS  DHL  USPS  Customer  Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals intact:  Yes  No

Thermometer Used:  Therm Fisher IR 5  
 Therm Fisher IR 6  
 Therm Fisher IR 7

Type of Ice: Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining contents: 08-04-17 AB

Temp must be measured from Temperature blank when present

Comments:

Temperature Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	1
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2
Chain of Custody Complete:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8
Filtered vol. Rec. for Diss. tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	9
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10
All containers received within manufacture's precautionary and/or expiration dates.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	15

If No, was preservative added?  Yes  No  
If added record lot no.: HNO3 \_\_\_\_\_ H2SO4 \_\_\_\_\_

#### Client Notification/ Resolution:

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Attachment 3**  
**Data Review Report #28274R**

## **Fibers Group**

### **Data Review**

GUAYAMA, PUERTO RICO

Volatiles Analyses

SDG #236929 (WO 655-04-26)

Analyses Performed By:  
eqlab - Environmental Quality Laboratories, Inc.  
San Juan, Puerto Rico

Report: #28274R

Review Level: Tier II

Project: CO001911.0005.1705A

## SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #236929 (WO 655-04-26) for samples collected in association with the Fibers Group Site. The review was conducted as a Tier II evaluation and included review of data package completeness. Only analytical data associated with constituents of concern were reviewed for this validation. Included with this assessment are the validation annotated sample result sheets and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	TPH	MET	MISC
EFF DUP-20170801	2710170	Water	08/01/2017	EFF-20170801	X				
INF-20170801	2710173	Water	08/01/2017		X				
EFF-20170801	2710174	Water	08/01/2017		X				
TB-20170801	2710179	Water	08/01/2017		X				

Note:

1. The matrix spike/matrix spike duplicate (MS/MSD) analysis was performed on sample location EFF-20170801.

## ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers
  - U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.
  - B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
- Quantitation (Q) Qualifiers
  - E The compound was quantitated above the calibration range.
  - D Concentration is based on a diluted sample analysis.
- Validation Qualifiers
  - J The compound was positively identified; however, the associated numerical value is an estimated concentration only.
  - UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.
  - JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
  - UB Compound considered non-detect at the listed value due to associated blank contamination.
  - N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.
  - R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

# VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

## 1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260	Water	14 days from collection to analysis	Cool to <6 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cool to <6 °C.

s.u. Standard units

All samples were analyzed within acceptable holding times.

## 2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the reporting limit (RL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the RL in the associated blanks; therefore detected sample results were not associated with blank contamination.

## 3. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

## 4. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
EFF-20170801	Chloromethane	>UL	>UL
	1,1-Dichloropropene	AC	< LL but > 10%
	Acrolein		
	4-Isopropyltoluene		
	Vinyl chloride		
	m,p-Xylene		
	o-Xylene		
	1,2,4-Trimethylbenzene	< LL but > 10%	<10%
	Naphthalene		
	trans-1,4-Dichloro-2-butene		
	1,3,5-Trimethylbenzene	<10%	<10%
	2-Chloroethyl vinyl ether		
	Iodomethane		
	Styrene		
Vinyl Acetate			

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
EFF-20170801	1,1-Dichloropropene
	Acrolein
	Vinyl chloride
	m,p-Xylene

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

## 5. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

## 6. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
EFF-20170801/ EFF DUP-20170801	Bromoform	2.1 J	1.7 J	AC
	Dibromochloromethane	2.2 J	1.5 J	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

## 7. System Performance and Overall Assessment

Note: 2-Chloroethyl vinyl ether degrades in the presence of acid. Since the samples were preserved with acid to a pH of less than 2, the not detected results for 2-chloroethyl vinyl ether were rejected for all samples within this SDG.

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

## DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
<b>Tier II Validation</b>					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment/Field blanks					X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS) Accuracy (%R)		X		X	
Laboratory Control Sample Duplicate (LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X	X		
Matrix Spike Duplicate (MSD) %R		X	X		
MS/MSD Precision RPD		X	X		
Field/Laboratory Duplicate Sample RPD		X		X	
Surrogate Spike %R		X		X	
Dilution Factor		X		X	
Moisture Content					X

%R     Percent recovery  
 RPD    Relative percent difference  
 %RSD   Relative standard deviation  
 %D     Percent difference

VALIDATION PERFORMED BY: Joseph C. Houser

SIGNATURE:



DATE: August 29, 2017

PEER REVIEW: Todd Church

DATE: August 29, 2017

**CHAIN OF CUSTODY/  
ANNOTATED SAMPLE ANALYSIS DATA SHEETS**

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



## Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DRI = Does Not Ignite MDL = Maximum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Maximum Reporting Level PIRL = Pesticide Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
 + = Parameter is not accredited under EQLab's NELAP Certification



The results presented herein meet all NELAC requirements.  
 Refer to eqlab certification number B87783 at www.eqlab.com.

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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

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Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	<i>R</i> ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	U	25.0	75.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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The results presented herein meet all NELAC requirements.  
 Refer to eqlab certification number E87785 at www.eqlab.com.

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 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



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Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	2.10	µg/L	J	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	2.20	µg/L	J	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	U	8.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	U	1.8	6.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignore MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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**ENVIRONMENTAL QUALITY LABORATORIES, INC.**  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U	2.3	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PIRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to the sample analyzed.  
 + = Parameter is not accredited under EQLab's NELAP Certification.



ACCREDITED IN ACCORDANCE WITH  
 NELAP  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	R ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	U	25.0	75.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTKL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	U	8.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	6.70	µg/L	--	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	BDL	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	U	1.8	6.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B



ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A

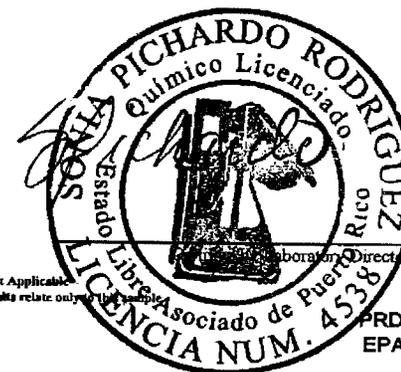


### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U	2.3	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NTVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignore MDL = Minimum Detection Limit N/A = Not Applicable  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	R ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	R ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B



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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	<i>R</i> ND	µg/L	J,U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	J,U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	J,U	25.0	75.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

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PRDOH Certified  
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To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	1.70	µg/L	J	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	1.50	µg/L	J	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

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 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	R ND	µg/L	J,U	8.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	R ND	µg/L	J,U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	R ND	µg/L	J,U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	R ND	µg/L	J,U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	J,U U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	J,U U	1.8	6.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

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 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U J	2.3	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	R ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
 + = Parameter is not accredited under EQLab's NELAP Certification



The results presented herein meet all NELAC requirements.  
 Refer to eqlab certification number E87783 at www.eqlab.com.

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959  
 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6485 www.eqlab.com



PROH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



## Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B



ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignore MDL = Minimum Detection Limit N/A = Not Applicable  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	R ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	U	25.0	75.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	U	8.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	U	1.8	6.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pasture Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U	2.3	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level EDL = Below Detection Limit DNI = Does Not Iguite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTEL = Parters Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to the sample.  
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ACCREDITED IN ACCORDANCE WITH  
  
 The results presented herein meet all NELAC requirements.  
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PRDOH Certified  
 EPA ID PR00014

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**  
**SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY**

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

M- 37381

LIMS # 2017-06945

CLIENT NAME: Arcadis Caribe  
P.O. #:

CLIENT ID: 655-04 W.O. #: 26  
PWSID #: FOLDER #: 236929

SITE: Guayma P.R.  
PROJECT:

CLIENT REP: Elwin Varela  
EQLAB REP:

SAMPLE INFORMATION		CONTAINER INFORMATION			FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: <u>2710179</u> MATRIX: <u>DI water</u> SOURCE: <u>TB-20170801</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B vx
	TIME: <u>0800</u>	<u>vial</u>		<u>40 ml</u>		
	TYPE: <u>Grab</u>	PRESERVATIVE <u>HCL</u>				
SAMPLE #: <u>2710173</u> MATRIX: <u>Ground water</u> SOURCE: <u>INF-20170801</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B VOL
	TIME: <u>0745</u>	<u>Vial</u>		<u>40 ml</u>		
	TYPE: <u>Grab</u>	PRESERVATIVE <u>HCL</u>				
SAMPLE #: <u>2710174</u> MATRIX: <u>Ground water</u> SOURCE: <u>EFF-20170801</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B VOL
	TIME: <u>0838</u>	<u>Vial</u>		<u>40 ml</u>		
	TYPE: <u>Grab</u>	PRESERVATIVE <u>HCL</u>				
SAMPLE #: <u>2710170</u> MATRIX: <u>Ground water</u> SOURCE: <u>EFFDUP-20170801</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B VOL
	TIME: <u>0838</u>	<u>Vial</u>		<u>40 ml</u>		
	TYPE: <u>Grab</u>	PRESERVATIVE <u>HCL</u>				
CUSTODY RECORD	SIGNATURE		DATE	TIME	SPECIAL INSTRUCTIONS / COMMENTS:	
Collected in field by:	<u>Andrés Colón</u>		<u>08/01/17</u>	<u>VARIAS</u>		
Fixed in field by:	<u>Andrés Colón</u>		<u>08/01/17</u>			
Authorized by:	<u>N/A</u>					
Received by EQLF:	<u>N/A</u>					
Released to EQLL by:	<u>[Signature]</u>		<u>08/01/17</u>	<u>1636</u>		
Received by EQLL:	<u>[Signature]</u>		<u>08/01/17</u>	<u>1636</u>		

\*EQLF = Eqlabs' Field Personnel.  
\*EQLL = Eqlabs' Log-in Personnel.

PJA/R

Arrival Temperature: 3.0°C Signature: [Signature]  
Eqlabs' general terms and conditions on reverse side of this document.

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**  
**SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY**

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

M- 37365

LIMS # 2017-06945

CLIENT NAME: Arcadis Corbe  
P.O. #:

CLIENT ID: 655-04 W.O. #: 26  
PWSID #: FOLDER #: 236929

SITE: Guayama P.A.  
PROJECT:

CLIENT REP: Elvin Varela  
EQLAB REP: E. Garcia

SAMPLE INFORMATION		CONTAINER INFORMATION			FIELD TESTING		ANALYSIS REQUESTED	
SAMPLE #: <u>2710171</u> MATRIX: <u>Ground water</u> SOURCE: <u>EFF MS-20170601</u>	DATE: <u>08/01/17</u>	TYPE: <u>vial</u>	COLOR:	VOLUME: <u>40 ml</u>			<u>EPA 8260B VOL</u>	
	TIME: <u>0838</u>							
	TYPE: <u>grab</u>	PRESERVATIVE: <u>HCL</u>						
SAMPLE #: <u>2710172</u> MATRIX: <u>Ground water</u> SOURCE: <u>EFF MSD-20170601</u>	DATE: <u>08/01/17</u>	TYPE: <u>vial</u>	COLOR:	VOLUME: <u>40 ml</u>			<u>EPA 8260B VOL</u>	
	TIME: <u>0838</u>							
	TYPE: <u>grab</u>	PRESERVATIVE: <u>HCL</u>						
SAMPLE #:	DATE:	TYPE:	COLOR:	VOLUME:				
MATRIX:	TIME:	PRESERVATIVE:						
SOURCE:	TYPE:							
SAMPLE #:	DATE:	TYPE:	COLOR:	VOLUME:				
MATRIX:	TIME:	PRESERVATIVE:						
SOURCE:	TYPE:							

CUSTODY RECORD	SIGNATURE	DATE	TIME	SPECIAL INSTRUCTIONS / COMMENTS:
Collected in field by:	<u>Andru Colon</u>	<u>08/01/17</u>	<u>0838</u>	
Fixed in field by:	<u>Andru Colon</u>	<u>08/01/17</u>	<u>0838</u>	
Authorized by:	<u>N/A</u>	<u>N/A</u>		
Received by EQLF:	<u>N/A</u>			
Released to EQLL by:	<u>[Signature]</u>	<u>08/01/17</u>	<u>1636</u>	
Received by EQLL:	<u>[Signature]</u>	<u>08/01/17</u>	<u>1636</u>	

\*EQLF = Eqlabs' Field Personnel.  
\*EQLL = Eqlabs' Log-in Personnel.

Arrival Temperature: 3.0°C Signature: [Signature]  
Eqlabs' general terms and conditions on reverse side of this document.

**Attachment 4**  
**EQLAB Laboratory Analytical Report #236929 (WO 655-04-26)**

# **QUALITY ASSURANCE REPORT**

**Prepared for:  
ARCADIS CARIBE, PSC**

**Project:  
Interno**

**Samples Received On:  
August 01, 2017**

**Facility:  
Guayama Project**

**W.O. #:  
655-04-26**





August 22, 2017

**ARCADIS CARIBE, PSC**  
LAS VISTAS SHOPPING VILLAGE #300  
AVE. FELISA RINCON OFFICE 23  
SAN JUAN, PR 00926-5956

Attn: Mr. Elvin Varela

**Re: Quality Assurance Report for the samples received on August 01, 2017**

Dear Mr. Varela,

Enclosed you will find the Quality Assurance Report for the samples received on August 01, 2017. The QC data submitted reflects the precision and accuracy of the analyzed samples.

Please feel free to contact us if you require any further information.

Cordially,

  
\_\_\_\_\_  
Lic. Janet Gómez-Rosario  
QA/QC Supervisor

## TABLE OF CONTENTS

<b>Section</b>	<b>Description</b>
1	Quality Assurance Narrative
2	Laboratory Test Report
3	Analytical Test Results Quality Assurance Report

## List of Appendices

<b>Appendix</b>	<b>Description</b>
A	Chain of Custody Documentation
B	Raw Data Worksheets
C	Proficiency Test (PT)

**SECTION 1**  
**QUALITY ASSURANCE NARRATIVE**

## QUALITY ASSURANCE NARRATIVE

### OVERVIEW

On August 01, 2017, Environmental Quality Laboratories, Inc. received from ARCADIS CARIBE, PSC, six samples (five Ground water and one DI water). The samples were collected by the client personnel at the Guayama Project facility on August 01, 2017 for the INTERNO project. The samples were analyzed for Volatile Organic Compounds (VOC'S). The samples were received in good condition, at 3°C and stored at 4°C ± 2°C in the refrigerator until the time of analysis. The following table shows the samples sources and the EQLAB sample number assigned to your samples upon receipt:

SAMPLE #	SOURCE	MATRIX
2710170	EFF DUP-20170801	GROUND WATER
2710171	EFF MS-20170801	GROUND WATER
2710172	EFF MSD-20170801	GROUND WATER
2710173	INF-20170801	GROUND WATER
2710174	EFF-20170801	GROUND WATER
2710179	TB-20170801	DI WATER

In the Appendices, you will find copies of the supporting documentation of your samples. The Appendix A contains the Chain of Custody Documentation and the Appendix B Raw Data Worksheets.

The QC data has been released after being subjected to a series of inspections. General deviations are summarized below. Specific QC issues associated with your samples are:

Sample Collection: All samples were collected by the Client personnel. EQ Lab did not find any deviation about this item.

Sample Management: EQ Lab did not find any deviation about this item.

Sample Preparation & Analysis: EQ Lab did not find any deviation about this item.

Sample Analysis: See below.

Laboratory Test Report: EQ Lab did not find any deviation about this item.

**Sample Analysis:** EPA 8260B VOC  
**Method:** USEPA SW-846 8260B  
**Run Number:** 190632  
**Analysis Date:** 08/14 - 15/17

Sample	Analyte	Deviation	Recovery (%)	Range (%)
2710171/MS	1,2,4-Trichlorobenzene	OOS	23	52 – 141
	1,3,5-Trimethylbenzene		0	61 – 125
	2-Chloroethyl vinyl ether		0	10 – 178
	Chloromethane		154	42 – 139
	Iodomethane		4.59	45 – 148
	Naphthalene		46.5	66 – 135
	Styrene		2.50	65 – 123
	Vinyl acetate		0	52 – 141
	Trans-1,4-Dichloro-2-butene		33.6	47 – 129
2710172/MSD	1,1-Dichloropropene	OOS	81.5	83 – 110
	1,2,4-Trimethylbenzene		0	52 – 141
	1,3,5-Trimethylbenzene		0	61 – 125
	2-Chloroethyl vinyl ether		0	10 – 178
	4-Isopropylbenzene		44.5	66 – 129
	Acrolein		34.8	47 – 157
	Chloromethane		151	42 – 139
	Iodomethane		0	45 – 148
	Naphthalene		0	66 – 135
	Styrene		0	65 – 123
	Vinyl acetate		0	52 – 141
	Vinyl chloride		57.0	39 – 151
	m,p-Xylene		19.0	56 – 145
	o-Xylene		45.0	54 – 143
trans-1,4-Dichloro-2-butene	0	47 – 129		

Explanation: The recoveries of the analytes mentioned above in samples 2710171/MS and 2710172/MSD, have recoveries which are out of specifications. Nevertheless, these analytes are in control in the Laboratory Fortified Blank 2712789/LFB, indicating that recoveries are out of specifications due to a possible matrix interference and not to a system related issue.

Sample	Analyte	Deviation	Recovery (%)	Range (%)
2712789/LFB	1,2,4-Trimethylbenzene	None	97.2	63 – 129
	1,3,5-Trimethylbenzene		98.3	68 – 123
	2-Chloroethyl vinyl ether		108	47 – 143
	Chloromethane		112	43 – 142
	Iodomethane		99.0	54 – 143
	Naphthalene		103	71 – 134
	Styrene		97.6	65 – 127
	Vinyl Acetate		93.1	53 – 144
	trans-1,4-Dichloro-2-butene		90.6	53 – 123
	1,1-Dichloropropene		100	67 – 131
	4-Isopropylbenzene		97.5	68 – 131
	Acrolein		100	40 – 153
	Vinyl chloride		111	52 – 140
	m,p-Xylene		99.4	63 – 130
	o-Xylene		97.1	66 – 124
trans-1,4-Dichloro-2-butene	90.6	53 – 123		

## General Comments

All analyses were performed in accordance with U.S. Environmental Protection Agency SW-846 or Standard Methods for the Examination of Water and Wastewater approved methodologies. The results associates with quality control samples were within the acceptance criteria established for these parameters with the exception of those discussed previously. After reviewing the documentation mentioned above we conclude that the data presented herein is valid and acceptable.

## Calculation & Reporting Formulas:

1. RPD = Relative Percent Difference

All Duplicates (DUP, MSD and LFBD) are calculated as follow:

$$RPD = \left\{ \frac{(\text{Final Result QC}) - (\text{Final Result Ref})}{\frac{(\text{Final Result QC}) + (\text{Final Result Ref})}{2}} \right\} \times 100$$

RPD is reported N.C. when the (value of Final Result) < 10X (value of MDL)

RPD General Acceptance criteria is (≤ 20%) for all matrices except Solid / Soil (≤ 40%)

2. The % of Recovery is calculated as follow:

$$\% \text{ Rec} = \left\{ \frac{(\text{Final Result QC})}{\text{Amount Added of QC}} \right\} \times 100$$

3. The % of Recovery for MS and MSD is calculated as follow:

$$\% \text{ Rec} = \left\{ \frac{(\text{Final Result QC}) - (\text{Final Result Ref})}{\text{Amount Added of QC}} \right\} \times 100$$



Prepared by:  
Bárbara Arroyo Santini  
QA/QC Coordinator III

08/22/2017

Date



Checked by  
Lic. Janet Gómez  
QA/QC Supervisor

08/22/2017

Date

**SECTION 2**  
**LABORATORY TEST REPORT**



*August 16, 2017*

**MR. ELVIN VARELA**

**ARCADIS CARIBE, PSC  
LAS VISTAS SHOPPING CENTER VILLAGE #300  
AVENIDA FELISA RINCON OFFICE 23  
SAN JUAN PR 00926-5956**

*I hereby certify that the results reported for EQ Lab Samples from 2710170 to 2710174 & 2710179 have been reviewed by me and are correct as presented herein.*



To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
 + = Parameter is not accredited under EQLab's NELAP Certification



The results presented herein meet all NELAC requirements.  
 Refer to eqlab certification number E87783 at www.eqlab.com.

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959  
 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	U	25.0	75.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
 + = Parameter is not accredited under EQLab's NELAP Certification



The results presented herein meet all NELAC requirements.  
 Refer to eqlab certification number E87783 at www.eqlab.com.

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	2.10	µg/L	J	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	2.20	µg/L	J	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	U	8.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	U	1.8	6.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

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 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF DUP-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710170	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U	2.3	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/15/2017	00:26	NIVA	08/04/2017	--	EPA 5030B

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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF MS-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710171	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	103	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	116	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	106	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	108	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	117	%	--	2.0	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	117	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	108	%	--	1.4	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	98.1	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	101	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	99.4	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	23.0	%	Q	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	100	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	107	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	110	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	108	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	0.00	%	Q	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B

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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR. 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF MS-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref #: N/A



### Laboratory Test Report

Sample Number: 2710171	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	101	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	107	%	--	2.0	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	99.2	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	100	%	--	1.5	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	94.4	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	113	%	--	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	0.00	%	Q	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	106	%	--	1.4	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	109	%	--	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	92.0	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	89.4	%	--	1.4	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	110	%	--	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	107	%	--	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	61.2	%	--	25.0	75.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	112	%	--	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	115	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B

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 SAN JUAN, PR 00926-5956

Attu: MR. ELVIN VARELA  
 Source: EFF MS-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710171	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	102	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	115	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	108	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	99.0	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	75.5	%	--	2.0	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	123	%	--	7.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	117	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	104	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	100	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	111	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	154	%	Q	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	106	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	110	%	--	1.5	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	119	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	96.0	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	82.7	%	--	30.0	75.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B

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Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710171	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	106	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	97.0	%	--	1.4	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	4.59	%	Q	8.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	106	%	--	2.0	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	46.5	%	Q	2.0	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	2.50	%	Q	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	111	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	106	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	111	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	114	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	139	%	--	1.5	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	0.00	%	Q	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	73.4	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	115	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	104	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	60.0	%	--	1.8	6.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B



ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF MS-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710171	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	97.5	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	99.8	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	101	%	--	1.0	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	91.3	%	--	2.3	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	105	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	106	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	118	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	101	%	--	1.2	3.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	33.6	%	Q	6.0	15.0	--	08/15/2017	00:57	NIVA	08/04/2017	--	EPA 5030B

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PR001H Certified  
 NELAP ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF MSD-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710172	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	99.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	113	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	103	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	104	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	113	%	--	2.0	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	114	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	81.5	%	Q	1.4	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	99.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	99.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	99.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	0.00	%	U	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	101	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	104	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	105	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	105	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	0.00	%	U	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B

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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR. 00926-5956

Atta: MR. ELVIN VARELA  
 Source: EFF MSD-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710172	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	99.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	104	%	--	2.0	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	97.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	102	%	--	1.5	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	91.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	112	%	--	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	0.00	%	U	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	117	%	--	1.4	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	107	%	--	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	96.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	44.5	%	Q	1.4	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	108	%	--	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	105	%	--	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	34.8	%	Q	25.0	75.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	111	%	--	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	111	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B



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PRDOH Certified  
 EPA ID PR00014

**To:** ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

**Attn:** MR. ELVIN VARELA  
**Source:** EFF MSD-20170801  
 GUAYAMA, PR

**Project Name:** INTERNO  
**Facility:** GUAYAMA PROJECT  
**Description:** GROUND WATER - Grab  
**Client Ref. #:** N/A



### Laboratory Test Report

Sample Number: 2710172	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	99.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	112	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	105	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	95.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	75.5	%	--	2.0	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	122	%	--	7.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	118	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	101	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	98.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	108	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	151	%	Q	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	102	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	106	%	--	1.5	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	122	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	92.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	81.3	%	--	30.0	75.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B

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Attn: MR. ELVIN VARELA  
 Source: EFF MSD-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710172	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	93.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	100	%	--	1.4	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Iodonethane	EPA 8260B	0.00	%	Q	8.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	97.5	%	--	2.0	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	0.00	%	Q	2.0	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	0.00	%	U	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	109	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	107	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	94.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	108	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	141	%	--	1.5	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	0.00	%	U	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	57.0	%	Q	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	114	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	95.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	19.0	%	Q	1.8	6.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
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 Refer to eqlab certification number E87783 at www.eqlab.com.

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959  
 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF MSD-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710172	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	88.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	88.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	98.0	%	--	1.0	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	45.0	%	Q	2.3	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	97.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	99.5	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	118	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	93.0	%	--	1.2	3.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	0.00	%	U	6.0	15.0	--	08/15/2017	01:29	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignore MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
 + = Parameter is not accredited under EQLab's NELAP Certification



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 Refer to eqlab certification number E87783 at www.eqlab.com.

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PROCH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR. 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 Refer to eqlab certification number E87782 at www.eqlab.com.

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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	U	25.0	75.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR. 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR. 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	U	8.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	6.70	µg/L	--	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	BDL	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	U	1.8	6.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B



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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: INF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

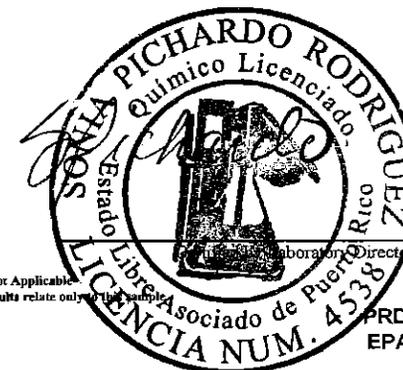
Sample Number: 2710173	Collected Date & Time: 08/01/2017 07:45	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U	2.3	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:26	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to the sample.  
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The results presented herein meet all NELAC requirements.  
 Refer to eqlab certification number E87783 at www.eqlab.com.



PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	J,U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	J,U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	J,U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959  
 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

**PRODH Certified  
 EPA ID PR00014**

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	ND	µg/L	J,U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	J,U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	J,U	25.0	75.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

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 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

**PRDOH Certified  
 EPA ID PR00014**

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grah  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	1.70	µg/L	J	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	J,U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	1.50	µg/L	J	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

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 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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**ENVIRONMENTAL QUALITY LABORATORIES, INC.**

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 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	J,U	8.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	J,U	2.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	J,U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	J,U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	J,U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	J,U	1.8	6.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B

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 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: EFF-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: GROUND WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710174	Collected Date & Time: 08/01/2017 08:38	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	J,U	2.3	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	J,U	6.0	15.0	--	08/14/2017	23:57	NIVA	08/04/2017	--	EPA 5030B



ND = Not Detected MCL = Maximum Contaminant Level EDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable  
 MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.  
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 Refer to eqlab certification number E87785 at www.eqlab.com.

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 PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PR10H Certified  
 EPA ID PR00014

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,1,1,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1,1-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1,2,2-Tetrachloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1,2-Trichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,1-Dichloropropene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,3-Trichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2,4-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromo-3-chloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dibromoethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,3,5-Trimethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

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**PRDOH Certified  
 EPA ID PR00014**

To: ARCADIS CARIBE, PSC  
 LAS VISTAS SHOPPING VILLAGE # 300  
 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
1,3-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,3-Dichloropropane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1,4-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
1-Chlorohexane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2,2-Dichloropropane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Butanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Chloroethyl vinyl ether	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
2-Hexanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
4-Chlorotoluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
4-Isopropyltoluene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
4-Methyl-2-pentanone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Acetone	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Acrolein	EPA 8260B	ND	µg/L	U	25.0	75.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Acrylonitrile	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Benzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

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 AVE. FELISA RINCON OFFICE 23  
 SAN JUAN, PR 00926-5956

Attn: MR. ELVIN VARELA  
 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



### Laboratory Test Report

Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Bromobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromodichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromoform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Bromomethane	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Carbon disulfide	EPA 8260B	ND	µg/L	U	7.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Carbon tetrachloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chlorobenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chloroethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chloroform	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Chloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dibromochloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dibromomethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dichlorodifluoromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Dichloromethane	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Epichlorohydrin	EPA 8260B	ND	µg/L	U	30.0	75.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

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 Source: TB-20170801  
 GUAYAMA, PR

Project Name: INTERNO  
 Facility: GUAYAMA PROJECT  
 Description: DI WATER - Grab  
 Client Ref. #: N/A



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Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
Ethylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Hexachlorobutadiene	EPA 8260B	ND	µg/L	U	1.4	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Iodomethane	EPA 8260B	ND	µg/L	U	8.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Isopropylbenzene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Naphthalene	EPA 8260B	ND	µg/L	U	2.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Styrene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Tetrachloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
+ Tetrahydrofuran	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Toluene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Trichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Trichlorofluoromethane	EPA 8260B	ND	µg/L	U	1.5	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Vinyl Acetate	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
Vinyl chloride	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
cis-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
cis-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
m,p-Xylene	EPA 8260B	ND	µg/L	U	1.8	6.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B



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Sample Number: 2710179	Collected Date & Time: 08/01/2017 08:00	Date of Report: 08/16/2017
Work Order: 655-04-26	Received Date & Time: 08/01/2017 16:36	Collected By: ACOLON
Delivery Slip: 2017-06945	Temperature at Arrival: 3.0 °C	Eqlab Rep.: EGARCIA
Folder Number: 236929		Proposal Number: 20166 - 2
Remarks:		

Parameter	Method	Results	Units	DQ	Limits			Analysis			Prep Method		
					MDL	MRL	MCL	Date	Time	By	Date	By	Method
n-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
n-Propylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
o-Dichlorobenzene	EPA 8260B	ND	µg/L	U	1.0	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
o-Xylene	EPA 8260B	ND	µg/L	U	2.3	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
sec-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
tert-Butylbenzene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
trans-1,2-Dichloroethene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
trans-1,3-Dichloropropene	EPA 8260B	ND	µg/L	U	1.2	3.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B
trans-1,4-Dichloro-2-butene	EPA 8260B	ND	µg/L	U	6.0	15.0	--	08/14/2017	21:23	NIVA	08/04/2017	--	EPA 5030B

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**SECTION 3**  
**ANALYTICAL TEST RESULTS**  
**QUALITY ASSURANCE REPORT**

## Analytical Test Results Quality Assurance Report

W. O. # 655-04-26  
Page 1 of 1

Date: August 22, 2017

### 1.0 Samples Analyzed:

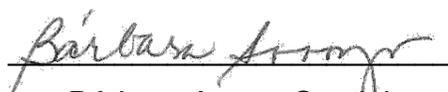
EQL SAMPLE #	DATE COLLECTED	DATE RECEIVED
2710170 – 2710174	08/01/17	08/01/17
2710179		

### 2.0 Instrumentation:

Parameter	Instrumentation Used
VOC's	V8-AG7890MS

### 3.0 Methodology:

Parameter	Method	Date Analyzed	Analyst
VOC's	EPA 8260B	08/14 – 15/17	NIVA



Bárbara Arroyo Santini  
QA/QC Coordinator III

# QUALITY CONTROL SUMMARY



**EPA 8260B VOC - Run #190632**

2712780 - LRB

Analyte Name	Reference Result	QC		Units	MDL	MRL	A/A	Rec. %	Accuracy		Precision		Analysis		
		Result	DQ						Acceptance Criteria		RPD	Acceptance Criteria	Date	Time	By
									Low Limit	High Limit		High Limit			
1,1,1,2-Tetrachloroethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,1,1-Trichloroethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,1,2,2-Tetrachloroethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,1,2-Trichloroethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,1-Dichloroethane	N/A	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,1-Dichloroethene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,1-Dichloropropene	N/A	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2,3-Trichlorobenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2,3-Trichloropropane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2,4-Trichlorobenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2,4-Trimethylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2-Dibromo-3-chloropropane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2-Dibromoethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2-Dichloroethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,2-Dichloropropane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,3,5-Trimethylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,3-Dichlorobenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,3-Dichloropropane	N/A	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1,4-Dichlorobenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
1-Chlorohexane	N/A	N.D	U	µg/L	1.5	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
2,2-Dichloropropane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
2-Butanone	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
2-Chloroethyl vinyl ether	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
2-Chlorotoluene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
2-Hexanone	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA



## QUALITY CONTROL SUMMARY



4-Bromofluorobenzene-SURR	N/A	20.0	--	µg/L	N/A	N/A	20.0	99.8	79	121	N/A	N/A	08/14/17	16:57	NIVA
4-Chlorotoluene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
4-Isopropyltoluene	N/A	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
4-Methyl-2-pentanone	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Acetone	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Acrolein	N/A	N.D	U	µg/L	25.0	75.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Acrylonitrile	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Benzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Bromobenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Bromochloromethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Bromodichloromethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Bromoform	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Bromomethane	N/A	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Carbon disulfide	N/A	N.D	U	µg/L	7.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Carbon tetrachloride	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Chlorobenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Chloroethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Chloroform	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Chloromethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Dibromochloromethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Dibromofluoromethane-SURR	N/A	20.3	--	µg/L	N/A	N/A	20.0	101	83	120	N/A	N/A	08/14/17	16:57	NIVA
Dibromomethane	N/A	N.D	U	µg/L	1.5	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Dichlorodifluoromethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Dichloromethane	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Epichlorohydrin	N/A	N.D	U	µg/L	30.0	75.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Ethylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Hexachlorobutadiene	N/A	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Iodomethane	N/A	N.D	U	µg/L	8.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Isopropylbenzene	N/A	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Naphthalene	N/A	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Styrene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Tetrachloroethene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA



## QUALITY CONTROL SUMMARY



Tetrahydrofuran	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Toluene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Toluene-d8-SURR	N/A	19.8	--	µg/L	N/A	N/A	20.0	99.2	80	116	N/A	N/A	N/A	08/14/17	16:57	NIVA
Trichloroethene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Trichlorofluoromethane	N/A	N.D	U	µg/L	1.5	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Vinyl Acetate	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
Vinyl chloride	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
cis-1,2-Dichloroethene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
cis-1,3-Dichloropropene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
m,p-Xylene	N/A	N.D	U	µg/L	1.8	6.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
n-Butylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
n-Propylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
o-Dichlorobenzene	N/A	N.D	U	µg/L	1.0	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
o-Xylene	N/A	N.D	U	µg/L	2.3	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
sec-Butylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
tert-Butylbenzene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
trans-1,2-Dichloroethene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
trans-1,3-Dichloropropene	N/A	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA
trans-1,4-Dichloro-2-butene	N/A	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	08/14/17	16:57	NIVA

### 2712781 - ICV

Analyte Name	Reference Result	QC Result	DQ	Units	MDL	MRL	A/A	Rec. %	Accuracy		RPD	Precision		Analysis		
									Acceptance Criteria			Acceptance Criteria		Date	Time	By
									Low Limit	High Limit		High Limit				
1,1,1,2-Tetrachloroethane	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,1,1-Trichloroethane	N/A	21.1	--	µg/L	1.2	3.0	20.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,1,2,2-Tetrachloroethane	N/A	19.7	--	µg/L	1.2	3.0	20.0	98.7	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,1,2-Trichloroethane	N/A	20.1	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,1-Dichloroethane	N/A	20.5	--	µg/L	2.0	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,1-Dichloroethene	N/A	20.3	--	µg/L	1.2	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,1-Dichloropropene	N/A	20.8	--	µg/L	1.4	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA	
1,2,3-Trichlorobenzene	N/A	20.0	--	µg/L	1.2	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA	



## QUALITY CONTROL SUMMARY



1,2,3-Trichloropropane	N/A	19.9	--	µg/L	1.2	3.0	20.0	99.3	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,2,4-Trichlorobenzene	N/A	20.0	--	µg/L	1.2	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,2,4-Trimethylbenzene	N/A	20.4	--	µg/L	1.2	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,2-Dibromo-3-chloropropane	N/A	20.4	--	µg/L	1.2	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,2-Dibromoethane	N/A	20.3	--	µg/L	1.2	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,2-Dichloroethane	N/A	20.1	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,2-Dichloropropane	N/A	20.1	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,3,5-Trimethylbenzene	N/A	20.8	--	µg/L	1.2	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,3-Dichlorobenzene	N/A	20.0	--	µg/L	1.2	3.0	20.0	99.8	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,3-Dichloropropane	N/A	20.3	--	µg/L	2.0	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
1,4-Dichlorobenzene	N/A	19.8	--	µg/L	1.2	3.0	20.0	98.8	80	120	N/A	N/A	08/14/17	18:27	NIVA
1-Chlorohexane	N/A	20.3	--	µg/L	1.5	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
2,2-Dichloropropane	N/A	18.6	--	µg/L	1.2	3.0	20.0	92.8	80	120	N/A	N/A	08/14/17	18:27	NIVA
2-Butanone	N/A	101.9	--	µg/L	6.0	15.0	100	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
2-Chloroethyl vinyl ether	N/A	104.2	--	µg/L	6.0	15.0	100	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
2-Chlorotoluene	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
2-Hexanone	N/A	104.0	--	µg/L	6.0	15.0	100	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
4-Bromofluorobenzene-SURR	N/A	20.1	--	µg/L	N/A	N/A	20.0	100	79	121	N/A	N/A	08/14/17	18:27	NIVA
4-Chlorotoluene	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
4-Isopropyltoluene	N/A	20.8	--	µg/L	1.4	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
4-Methyl-2-pentanone	N/A	103.6	--	µg/L	6.0	15.0	100	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
Acetone	N/A	95.4	--	µg/L	6.0	15.0	100	95.4	80	120	N/A	N/A	08/14/17	18:27	NIVA
Acrolein	N/A	485.6	--	µg/L	25.0	75.0	500	97.1	80	120	N/A	N/A	08/14/17	18:27	NIVA
Acrylonitrile	N/A	101.2	--	µg/L	6.0	15.0	100	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
Benzene	N/A	20.7	--	µg/L	1.2	3.0	20.0	103	80	120	N/A	N/A	08/14/17	18:27	NIVA
Bromobenzene	N/A	20.0	--	µg/L	1.2	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
Bromochloromethane	N/A	20.4	--	µg/L	1.2	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
Bromodichloromethane	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
Bromoform	N/A	19.3	--	µg/L	1.2	3.0	20.0	96.3	80	120	N/A	N/A	08/14/17	18:27	NIVA
Bromomethane	N/A	20.1	--	µg/L	2.0	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
Carbon disulfide	N/A	102.3	--	µg/L	7.0	15.0	100	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
Carbon tetrachloride	N/A	20.9	--	µg/L	1.2	3.0	20.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA



## QUALITY CONTROL SUMMARY



Chlorobenzene	N/A	20.0	--	µg/L	1.2	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
Chloroethane	N/A	19.2	--	µg/L	1.2	3.0	20.0	95.8	80	120	N/A	N/A	08/14/17	18:27	NIVA
Chloroform	N/A	20.0	--	µg/L	1.2	3.0	20.0	99.8	80	120	N/A	N/A	08/14/17	18:27	NIVA
Chloromethane	N/A	21.0	--	µg/L	1.2	3.0	20.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA
Dibromochloromethane	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
Dibromofluoromethane-SURR	N/A	20.0	--	µg/L	N/A	N/A	20.0	99.8	83	120	N/A	N/A	08/14/17	18:27	NIVA
Dibromomethane	N/A	20.1	--	µg/L	1.5	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
Dichlorodifluoromethane	N/A	22.3	--	µg/L	1.2	3.0	20.0	111	80	120	N/A	N/A	08/14/17	18:27	NIVA
Dichloromethane	N/A	21.2	--	µg/L	1.2	3.0	20.0	106	80	120	N/A	N/A	08/14/17	18:27	NIVA
Epichlorohydrin	N/A	494.3	--	µg/L	30.0	75.0	500	98.9	80	120	N/A	N/A	08/14/17	18:27	NIVA
Ethylbenzene	N/A	20.8	--	µg/L	1.2	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
Hexachlorobutadiene	N/A	20.0	--	µg/L	1.4	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
Iodomethane	N/A	103.3	--	µg/L	8.0	15.0	100	103	80	120	N/A	N/A	08/14/17	18:27	NIVA
Isopropylbenzene	N/A	21.2	--	µg/L	2.0	3.0	20.0	106	80	120	N/A	N/A	08/14/17	18:27	NIVA
Naphthalene	N/A	20.6	--	µg/L	2.0	3.0	20.0	103	80	120	N/A	N/A	08/14/17	18:27	NIVA
Styrene	N/A	20.6	--	µg/L	1.2	3.0	20.0	103	80	120	N/A	N/A	08/14/17	18:27	NIVA
Tetrachloroethene	N/A	21.0	--	µg/L	1.2	3.0	20.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA
Tetrahydrofuran	N/A	19.5	--	µg/L	1.2	3.0	20.0	97.4	80	120	N/A	N/A	08/14/17	18:27	NIVA
Toluene	N/A	21.0	--	µg/L	1.2	3.0	20.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA
Toluene-d8-SURR	N/A	20.1	--	µg/L	N/A	N/A	20.0	101	80	116	N/A	N/A	08/14/17	18:27	NIVA
Trichloroethene	N/A	21.0	--	µg/L	1.2	3.0	20.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA
Trichlorofluoromethane	N/A	22.6	--	µg/L	1.5	3.0	20.0	113	80	120	N/A	N/A	08/14/17	18:27	NIVA
Vinyl Acetate	N/A	98.3	--	µg/L	6.0	15.0	100	98.3	80	120	N/A	N/A	08/14/17	18:27	NIVA
Vinyl chloride	N/A	22.0	--	µg/L	1.2	3.0	20.0	110	80	120	N/A	N/A	08/14/17	18:27	NIVA
cis-1,2-Dichloroethene	N/A	20.7	--	µg/L	1.2	3.0	20.0	103	80	120	N/A	N/A	08/14/17	18:27	NIVA
cis-1,3-Dichloropropene	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
m,p-Xylene	N/A	42.0	--	µg/L	1.8	6.0	40.0	105	80	120	N/A	N/A	08/14/17	18:27	NIVA
n-Butylbenzene	N/A	20.4	--	µg/L	1.2	3.0	20.0	102	80	120	N/A	N/A	08/14/17	18:27	NIVA
n-Propylbenzene	N/A	20.8	--	µg/L	1.2	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
o-Dichlorobenzene	N/A	20.0	--	µg/L	1.0	3.0	20.0	99.9	80	120	N/A	N/A	08/14/17	18:27	NIVA
o-Xylene	N/A	20.6	--	µg/L	2.3	3.0	20.0	103	80	120	N/A	N/A	08/14/17	18:27	NIVA
sec-Butylbenzene	N/A	20.9	--	µg/L	1.2	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA



## QUALITY CONTROL SUMMARY



tert-Butylbenzene	N/A	20.8	--	µg/L	1.2	3.0	20.0	104	80	120	N/A	N/A	08/14/17	18:27	NIVA
trans-1,2-Dichloroethene	N/A	20.1	--	µg/L	1.2	3.0	20.0	101	80	120	N/A	N/A	08/14/17	18:27	NIVA
trans-1,3-Dichloropropene	N/A	20.0	--	µg/L	1.2	3.0	20.0	100	80	120	N/A	N/A	08/14/17	18:27	NIVA
trans-1,4-Dichloro-2-butene	N/A	95.6	--	µg/L	6.0	15.0	100	95.6	80	120	N/A	N/A	08/14/17	18:27	NIVA

### 2710170 - DUP

Reference Sample Number is: 2710174

Analyte Name	Reference Result	QC Result	DQ	Units	MDL	MRL	A/A	Rec. %	Accuracy		RPD	Precision		Analysis		
									Acceptance Criteria			Acceptance Criteria		Date	Time	By
									Low Limit	High Limit		High Limit				
1,1,1,2-Tetrachloroethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,1,1-Trichloroethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,1,2,2-Tetrachloroethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,1,2-Trichloroethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,1-Dichloroethane	N.D	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,1-Dichloroethene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,1-Dichloropropene	N.D	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2,3-Trichlorobenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2,3-Trichloropropane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2,4-Trichlorobenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2,4-Trimethylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2-Dibromo-3-chloropropane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2-Dibromoethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2-Dichloroethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,2-Dichloropropane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,3,5-Trimethylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,3-Dichlorobenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,3-Dichloropropane	N.D	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1,4-Dichlorobenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
1-Chlorohexane	N.D	N.D	U	µg/L	1.5	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
2,2-Dichloropropane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
2-Butanone	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	
2-Chloroethyl vinyl ether	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA	



## QUALITY CONTROL SUMMARY



2-Chlorotoluene	N.D	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
2-Hexanone	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
4-Bromofluorobenzene-SURR	19.9	19.8	--	µg/L	N/A	N/A	20.00	98.8	71	125	N/A	N/A	08/15/17	00:26	NIVA
4-Chlorotoluene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
4-Isopropyltoluene	N.D	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
4-Methyl-2-pentanone	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Acetone	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Acrolein	N.D	N.D	U	µg/L	25.0	75.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Acrylonitrile	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Benzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Bromobenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Bromochloromethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Bromodichloromethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Bromoform	1.7	2.1	J	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Bromomethane	N.D	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Carbon disulfide	N.D	N.D	U	µg/L	7.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Carbon tetrachloride	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Chlorobenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Chloroethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Chloroform	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Chloromethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Dibromochloromethane	1.5	2.2	J	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Dibromofluoromethane-SURR	20.6	20.6	--	µg/L	N/A	N/A	20.00	103	76	123	N/A	N/A	08/15/17	00:26	NIVA
Dibromomethane	N.D	N.D	U	µg/L	1.5	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Dichlorodifluoromethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Dichloromethane	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Epichlorohydrin	N.D	N.D	U	µg/L	30.0	75.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Ethylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Hexachlorobutadiene	N.D	N.D	U	µg/L	1.4	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Iodomethane	N.D	N.D	U	µg/L	8.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Isopropylbenzene	N.D	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Naphthalene	N.D	N.D	U	µg/L	2.0	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA



## QUALITY CONTROL SUMMARY



Styrene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Tetrachloroethene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Tetrahydrofuran	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Toluene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Toluene-d8-SURR	20.0	19.7	--	µg/L	N/A	N/A	20.00	98.7	77	122	N/A	N/A	08/15/17	00:26	NIVA
Trichloroethene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Trichlorofluoromethane	N.D	N.D	U	µg/L	1.5	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Vinyl Acetate	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
Vinyl chloride	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
cis-1,2-Dichloroethene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
cis-1,3-Dichloropropene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
m,p-Xylene	N.D	N.D	U	µg/L	1.8	6.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
n-Butylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
n-Propylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
o-Dichlorobenzene	N.D	N.D	U	µg/L	1.0	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
o-Xylene	N.D	N.D	U	µg/L	2.3	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
sec-Butylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
tert-Butylbenzene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
trans-1,2-Dichloroethene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
trans-1,3-Dichloropropene	N.D	N.D	U	µg/L	1.2	3.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA
trans-1,4-Dichloro-2-butene	N.D	N.D	U	µg/L	6.0	15.0	N/A	N/A	N/A	N/A	N.C.	20	08/15/17	00:26	NIVA

### 2710171 - MS

Reference Sample Number is: 2710174

Analyte Name	Reference Result	QC Result	DQ	Units	MDL	MRL	A/A	Rec. %	Accuracy		RPD	Precision		Analysis		
									Acceptance Criteria			Acceptance Criteria		Date	Time	By
									Low Limit	High Limit		High Limit				
1,1,1,2-Tetrachloroethane	N.D	20.6	--	µg/L	1.2	3.0	20.0	103	67	124	N/A	N/A	08/15/17	00:57	NIVA	
1,1,1-Trichloroethane	N.D	23.1	--	µg/L	1.2	3.0	20.0	116	69	140	N/A	N/A	08/15/17	00:57	NIVA	
1,1,2,2-Tetrachloroethane	N.D	21.1	--	µg/L	1.2	3.0	20.0	106	64	122	N/A	N/A	08/15/17	00:57	NIVA	
1,1,2-Trichloroethane	N.D	21.5	--	µg/L	1.2	3.0	20.0	108	78	125	N/A	N/A	08/15/17	00:57	NIVA	
1,1-Dichloroethane	N.D	23.4	--	µg/L	2.0	3.0	20.0	117	56	141	N/A	N/A	08/15/17	00:57	NIVA	
1,1-Dichloroethene	N.D	23.4	--	µg/L	1.2	3.0	20.0	117	44	155	N/A	N/A	08/15/17	00:57	NIVA	



## QUALITY CONTROL SUMMARY



1,1-Dichloropropene	N.D	21.6	--	µg/L	1.4	3.0	20.0	108	83	110	N/A	N/A	08/15/17	00:57	NIVA
1,2,3-Trichlorobenzene	N.D	19.6	--	µg/L	1.2	3.0	20.0	98.1	71	119	N/A	N/A	08/15/17	00:57	NIVA
1,2,3-Trichloropropane	N.D	20.3	--	µg/L	1.2	3.0	20.0	101	47	131	N/A	N/A	08/15/17	00:57	NIVA
1,2,4-Trichlorobenzene	N.D	19.9	--	µg/L	1.2	3.0	20.0	99.4	53	139	N/A	N/A	08/15/17	00:57	NIVA
1,2,4-Trimethylbenzene	N.D	4.6	Q	µg/L	1.2	3.0	20.0	23.0	52	141	N/A	N/A	08/15/17	00:57	NIVA
1,2-Dibromo-3-chloropropane	N.D	20.0	--	µg/L	1.2	3.0	20.0	100	67	140	N/A	N/A	08/15/17	00:57	NIVA
1,2-Dibromoethane	N.D	21.5	--	µg/L	1.2	3.0	20.0	107	66	140	N/A	N/A	08/15/17	00:57	NIVA
1,2-Dichloroethane	N.D	22.0	--	µg/L	1.2	3.0	20.0	110	60	139	N/A	N/A	08/15/17	00:57	NIVA
1,2-Dichloropropane	N.D	21.6	--	µg/L	1.2	3.0	20.0	108	71	121	N/A	N/A	08/15/17	00:57	NIVA
1,3,5-Trimethylbenzene	N.D	N.D.	Q	µg/L	1.2	3.0	20.0	0.000	61	125	N/A	N/A	08/15/17	00:57	NIVA
1,3-Dichlorobenzene	N.D	20.2	--	µg/L	1.2	3.0	20.0	101	61	129	N/A	N/A	08/15/17	00:57	NIVA
1,3-Dichloropropane	N.D	21.4	--	µg/L	2.0	3.0	20.0	107	69	124	N/A	N/A	08/15/17	00:57	NIVA
1,4-Dichlorobenzene	N.D	19.8	--	µg/L	1.2	3.0	20.0	99.2	73	122	N/A	N/A	08/15/17	00:57	NIVA
1-Chlorohexane	N.D	20.0	--	µg/L	1.5	3.0	20.0	100	48	136	N/A	N/A	08/15/17	00:57	NIVA
2,2-Dichloropropane	N.D	18.9	--	µg/L	1.2	3.0	20.0	94.4	13	157	N/A	N/A	08/15/17	00:57	NIVA
2-Butanone	N.D	112.8	--	µg/L	6.0	15.0	100	113	43	151	N/A	N/A	08/15/17	00:57	NIVA
2-Chloroethyl vinyl ether	N.D	N.D.	Q	µg/L	6.0	15.0	100	0.000	10	178	N/A	N/A	08/15/17	00:57	NIVA
2-Chlorotoluene	N.D	21.2	--	µg/L	1.4	3.0	20.0	106	64	139	N/A	N/A	08/15/17	00:57	NIVA
2-Hexanone	N.D	108.9	--	µg/L	6.0	15.0	100	109	53	147	N/A	N/A	08/15/17	00:57	NIVA
4-Bromofluorobenzene-SURR	19.9	20.0	--	µg/L	N/A	N/A	20.00	99.9	71	125	N/A	N/A	08/15/17	00:57	NIVA
4-Chlorotoluene	N.D	18.4	--	µg/L	1.2	3.0	20.0	92.0	64	128	N/A	N/A	08/15/17	00:57	NIVA
4-Isopropyltoluene	N.D	17.9	--	µg/L	1.4	3.0	20.0	89.4	66	129	N/A	N/A	08/15/17	00:57	NIVA
4-Methyl-2-pentanone	N.D	109.7	--	µg/L	6.0	15.0	100	110	57	143	N/A	N/A	08/15/17	00:57	NIVA
Acetone	N.D	106.9	--	µg/L	6.0	15.0	100	107	33	154	N/A	N/A	08/15/17	00:57	NIVA
Acrolein	N.D	305.9	--	µg/L	25.0	75.0	500	61.2	47	157	N/A	N/A	08/15/17	00:57	NIVA
Acrylonitrile	N.D	112.0	--	µg/L	6.0	15.0	100	112	34	160	N/A	N/A	08/15/17	00:57	NIVA
Benzene	N.D	23.0	--	µg/L	1.2	3.0	20.0	115	65	139	N/A	N/A	08/15/17	00:57	NIVA
Bromobenzene	N.D	20.3	--	µg/L	1.2	3.0	20.0	102	64	120	N/A	N/A	08/15/17	00:57	NIVA
Bromochloromethane	N.D	23.0	--	µg/L	1.2	3.0	20.0	115	49	150	N/A	N/A	08/15/17	00:57	NIVA
Bromodichloromethane	N.D	21.6	--	µg/L	1.2	3.0	20.0	108	64	141	N/A	N/A	08/15/17	00:57	NIVA
Bromoform	1.7	21.5	--	µg/L	1.2	3.0	20.0	99.0	61	132	N/A	N/A	08/15/17	00:57	NIVA
Bromomethane	N.D	15.1	--	µg/L	2.0	3.0	20.0	75.5	35	163	N/A	N/A	08/15/17	00:57	NIVA



## QUALITY CONTROL SUMMARY



Carbon disulfide	N.D	123.5	--	µg/L	7.0	15.0	100	123	48	158	N/A	N/A	08/15/17	00:57	NIVA
Carbon tetrachloride	N.D	23.5	--	µg/L	1.2	3.0	20.0	117	73	137	N/A	N/A	08/15/17	00:57	NIVA
Chlorobenzene	N.D	20.9	--	µg/L	1.2	3.0	20.0	104	68	121	N/A	N/A	08/15/17	00:57	NIVA
Chloroethane	N.D	20.1	--	µg/L	1.2	3.0	20.0	100	50	142	N/A	N/A	08/15/17	00:57	NIVA
Chloroform	N.D	22.3	--	µg/L	1.2	3.0	20.0	111	59	140	N/A	N/A	08/15/17	00:57	NIVA
Chloromethane	N.D	30.7	Q	µg/L	1.2	3.0	20.0	154	42	139	N/A	N/A	08/15/17	00:57	NIVA
Dibromochloromethane	1.5	22.7	--	µg/L	1.2	3.0	20.0	106	67	137	N/A	N/A	08/15/17	00:57	NIVA
Dibromofluoromethane-SURR	20.6	20.0	--	µg/L	N/A	N/A	20.00	100	76	123	N/A	N/A	08/15/17	00:57	NIVA
Dibromomethane	N.D	22.0	--	µg/L	1.5	3.0	20.0	110	72	139	N/A	N/A	08/15/17	00:57	NIVA
Dichlorodifluoromethane	N.D	23.9	--	µg/L	1.2	3.0	20.0	119	42	157	N/A	N/A	08/15/17	00:57	NIVA
Dichloromethane	N.D	19.2	--	µg/L	1.2	3.0	20.0	96.0	56	135	N/A	N/A	08/15/17	00:57	NIVA
Epichlorohydrin	N.D	413.6	--	µg/L	30.0	75.0	500	82.7	37	129	N/A	N/A	08/15/17	00:57	NIVA
Ethylbenzene	N.D	21.2	--	µg/L	1.2	3.0	20.0	106	58	136	N/A	N/A	08/15/17	00:57	NIVA
Hexachlorobutadiene	N.D	19.4	--	µg/L	1.4	3.0	20.0	97.0	62	124	N/A	N/A	08/15/17	00:57	NIVA
Iodomethane	N.D	BDL	Q	µg/L	8.0	15.0	100	4.59	45	148	N/A	N/A	08/15/17	00:57	NIVA
Isopropylbenzene	N.D	21.3	--	µg/L	2.0	3.0	20.0	106	64	122	N/A	N/A	08/15/17	00:57	NIVA
Naphthalene	N.D	9.3	Q	µg/L	2.0	3.0	20.0	46.5	66	135	N/A	N/A	08/15/17	00:57	NIVA
Styrene	N.D	BDL	Q	µg/L	1.2	3.0	20.0	2.50	65	123	N/A	N/A	08/15/17	00:57	NIVA
Tetrachloroethene	N.D	22.3	--	µg/L	1.2	3.0	20.0	111	64	138	N/A	N/A	08/15/17	00:57	NIVA
Tetrahydrofuran	N.D	21.2	--	µg/L	1.2	3.0	20.0	106	51	147	N/A	N/A	08/15/17	00:57	NIVA
Toluene	N.D	22.2	--	µg/L	1.2	3.0	20.0	111	65	140	N/A	N/A	08/15/17	00:57	NIVA
Toluene-d8-SURR	20.0	20.4	--	µg/L	N/A	N/A	20.00	102	77	122	N/A	N/A	08/15/17	00:57	NIVA
Trichloroethene	N.D	22.8	--	µg/L	1.2	3.0	20.0	114	76	126	N/A	N/A	08/15/17	00:57	NIVA
Trichlorofluoromethane	N.D	27.8	--	µg/L	1.5	3.0	20.0	139	60	144	N/A	N/A	08/15/17	00:57	NIVA
Vinyl Acetate	N.D	N.D.	Q	µg/L	6.0	15.0	100	0.00	52	141	N/A	N/A	08/15/17	00:57	NIVA
Vinyl chloride	N.D	14.7	--	µg/L	1.2	3.0	20.0	73.4	39	151	N/A	N/A	08/15/17	00:57	NIVA
cis-1,2-Dichloroethene	N.D	22.9	--	µg/L	1.2	3.0	20.0	115	66	127	N/A	N/A	08/15/17	00:57	NIVA
cis-1,3-Dichloropropene	N.D	20.7	--	µg/L	1.2	3.0	20.0	104	57	131	N/A	N/A	08/15/17	00:57	NIVA
m,p-Xylene	N.D	24.0	--	µg/L	1.8	6.0	40.0	60.0	56	145	N/A	N/A	08/15/17	00:57	NIVA
n-Butylbenzene	N.D	19.5	--	µg/L	1.2	3.0	20.0	97.5	72	114	N/A	N/A	08/15/17	00:57	NIVA
n-Propylbenzene	N.D	20.0	--	µg/L	1.2	3.0	20.0	99.8	61	123	N/A	N/A	08/15/17	00:57	NIVA
o-Dichlorobenzene	N.D	20.2	--	µg/L	1.0	3.0	20.0	101	73	124	N/A	N/A	08/15/17	00:57	NIVA



## QUALITY CONTROL SUMMARY



o-Xylene	N.D	18.3	--	µg/L	2.3	3.0	20.0	91.3	54	143	N/A	N/A	08/15/17	00:57	NIVA
sec-Butylbenzene	N.D	21.0	--	µg/L	1.2	3.0	20.0	105	64	114	N/A	N/A	08/15/17	00:57	NIVA
tert-Butylbenzene	N.D	21.3	--	µg/L	1.2	3.0	20.0	106	68	113	N/A	N/A	08/15/17	00:57	NIVA
trans-1,2-Dichloroethene	N.D	23.6	--	µg/L	1.2	3.0	20.0	118	56	146	N/A	N/A	08/15/17	00:57	NIVA
trans-1,3-Dichloropropene	N.D	20.1	--	µg/L	1.2	3.0	20.0	101	59	130	N/A	N/A	08/15/17	00:57	NIVA
trans-1,4-Dichloro-2-butene	N.D	33.6	Q	µg/L	6.0	15.0	100	33.6	47	129	N/A	N/A	08/15/17	00:57	NIVA

### 2710172 - MSD

Reference Sample Number is: 2710174

Analyte Name	Reference Result	QC Result	DQ	Units	MDL	MRL	A/A	Rec. %	Accuracy		RPD	Precision		Analysis		
									Acceptance Criteria			Acceptance Criteria		Date	Time	By
									Low Limit	High Limit		High Limit				
1,1,1,2-Tetrachloroethane	N.D	19.9	--	µg/L	1.2	3.0	20.0	99.5	67	124	3.46	20	08/15/17	01:29	NIVA	
1,1,1-Trichloroethane	N.D	22.5	--	µg/L	1.2	3.0	20.0	113	69	140	2.63	20	08/15/17	01:29	NIVA	
1,1,2,2-Tetrachloroethane	N.D	20.5	--	µg/L	1.2	3.0	20.0	103	64	122	2.89	20	08/15/17	01:29	NIVA	
1,1,2-Trichloroethane	N.D	20.7	--	µg/L	1.2	3.0	20.0	104	78	125	3.79	20	08/15/17	01:29	NIVA	
1,1-Dichloroethane	N.D	22.5	--	µg/L	2.0	3.0	20.0	113	56	141	3.92	20	08/15/17	01:29	NIVA	
1,1-Dichloroethene	N.D	22.7	--	µg/L	1.2	3.0	20.0	114	44	155	3.04	20	08/15/17	01:29	NIVA	
1,1-Dichloropropene	N.D	16.3	Q	µg/L	1.4	3.0	20.0	81.5	83	110	28.0	20	08/15/17	01:29	NIVA	
1,2,3-Trichlorobenzene	N.D	19.8	--	µg/L	1.2	3.0	20.0	99.0	71	119	1.02	20	08/15/17	01:29	NIVA	
1,2,3-Trichloropropane	N.D	19.8	--	µg/L	1.2	3.0	20.0	99.0	47	131	2.49	20	08/15/17	01:29	NIVA	
1,2,4-Trichlorobenzene	N.D	19.9	--	µg/L	1.2	3.0	20.0	99.5	53	139	0.00	20	08/15/17	01:29	NIVA	
1,2,4-Trimethylbenzene	N.D	N.D.	U	µg/L	1.2	3.0	20.0	0.00	52	141	N/A	20	08/15/17	01:29	NIVA	
1,2-Dibromo-3-chloropropane	N.D	20.1	--	µg/L	1.2	3.0	20.0	101	67	140	0.499	20	08/15/17	01:29	NIVA	
1,2-Dibromoethane	N.D	20.7	--	µg/L	1.2	3.0	20.0	104	66	140	3.79	20	08/15/17	01:29	NIVA	
1,2-Dichloroethane	N.D	21.0	--	µg/L	1.2	3.0	20.0	105	60	139	4.65	20	08/15/17	01:29	NIVA	
1,2-Dichloropropane	N.D	21.0	--	µg/L	1.2	3.0	20.0	105	71	121	2.82	20	08/15/17	01:29	NIVA	
1,3,5-Trimethylbenzene	N.D	N.D.	U	µg/L	1.2	3.0	20.0	0.00	61	125	N/A	20	08/15/17	01:29	NIVA	
1,3-Dichlorobenzene	N.D	19.9	--	µg/L	1.2	3.0	20.0	99.5	61	129	1.50	20	08/15/17	01:29	NIVA	
1,3-Dichloropropane	N.D	20.7	--	µg/L	2.0	3.0	20.0	104	69	124	3.33	20	08/15/17	01:29	NIVA	
1,4-Dichlorobenzene	N.D	19.4	--	µg/L	1.2	3.0	20.0	97.0	73	122	2.04	20	08/15/17	01:29	NIVA	
1-Chlorohexane	N.D	20.4	--	µg/L	1.5	3.0	20.0	102	48	136	1.98	20	08/15/17	01:29	NIVA	
2,2-Dichloropropane	N.D	18.2	--	µg/L	1.2	3.0	20.0	91.0	13	157	3.77	20	08/15/17	01:29	NIVA	



## QUALITY CONTROL SUMMARY



2-Butanone	N.D	112.0	--	µg/L	6.0	15.0	100	112	43	151	0.712	20	08/15/17	01:29	NIVA
2-Chloroethyl vinyl ether	N.D	N.D.	U	µg/L	6.0	15.0	100	0.00	10	178	N/A	20	08/15/17	01:29	NIVA
2-Chlorotoluene	N.D	23.3	--	µg/L	1.4	3.0	20.0	117	64	139	9.44	20	08/15/17	01:29	NIVA
2-Hexanone	N.D	106.9	--	µg/L	6.0	15.0	100	107	53	147	1.85	20	08/15/17	01:29	NIVA
4-Bromofluorobenzene-SURR	19.9	20.1	--	µg/L	N/A	N/A	20.00	100	71	125	N/A	N/A	08/15/17	01:29	NIVA
4-Chlorotoluene	N.D	19.2	--	µg/L	1.2	3.0	20.0	96.0	64	128	4.26	20	08/15/17	01:29	NIVA
4-Isopropyltoluene	N.D	8.9	Q	µg/L	1.4	3.0	20.0	44.5	66	129	67.2	20	08/15/17	01:29	NIVA
4-Methyl-2-pentanone	N.D	108.0	--	µg/L	6.0	15.0	100	108	57	143	1.56	20	08/15/17	01:29	NIVA
Acetone	N.D	105.2	--	µg/L	6.0	15.0	100	105	33	154	1.60	20	08/15/17	01:29	NIVA
Acrolein	N.D	173.8	Q	µg/L	25.0	75.0	500	34.8	47	157	55.1	20	08/15/17	01:29	NIVA
Acrylonitrile	N.D	111.0	--	µg/L	6.0	15.0	100	111	34	160	0.897	20	08/15/17	01:29	NIVA
Benzene	N.D	22.1	--	µg/L	1.2	3.0	20.0	111	65	139	3.99	20	08/15/17	01:29	NIVA
Bromobenzene	N.D	19.8	--	µg/L	1.2	3.0	20.0	99.0	64	120	2.49	20	08/15/17	01:29	NIVA
Bromochloromethane	N.D	22.3	--	µg/L	1.2	3.0	20.0	112	49	150	3.09	20	08/15/17	01:29	NIVA
Bromodichloromethane	N.D	21.0	--	µg/L	1.2	3.0	20.0	105	64	141	2.82	20	08/15/17	01:29	NIVA
Bromoform	1.7	20.8	--	µg/L	1.2	3.0	20.0	95.5	61	132	3.31	20	08/15/17	01:29	NIVA
Bromomethane	N.D	15.1	--	µg/L	2.0	3.0	20.0	75.5	35	163	N.C.	20	08/15/17	01:29	NIVA
Carbon disulfide	N.D	121.6	--	µg/L	7.0	15.0	100	122	48	158	1.55	20	08/15/17	01:29	NIVA
Carbon tetrachloride	N.D	23.5	--	µg/L	1.2	3.0	20.0	118	73	137	0.00	20	08/15/17	01:29	NIVA
Chlorobenzene	N.D	20.2	--	µg/L	1.2	3.0	20.0	101	68	121	3.41	20	08/15/17	01:29	NIVA
Chloroethane	N.D	19.7	--	µg/L	1.2	3.0	20.0	98.5	50	142	2.01	20	08/15/17	01:29	NIVA
Chloroform	N.D	21.5	--	µg/L	1.2	3.0	20.0	108	59	140	3.65	20	08/15/17	01:29	NIVA
Chloromethane	N.D	30.1	Q	µg/L	1.2	3.0	20.0	151	42	139	1.97	20	08/15/17	01:29	NIVA
Dibromochloromethane	1.5	21.9	--	µg/L	1.2	3.0	20.0	102	67	137	3.59	20	08/15/17	01:29	NIVA
Dibromofluoromethane-SURR	20.6	20.0	--	µg/L	N/A	N/A	20.00	99.8	76	123	N/A	N/A	08/15/17	01:29	NIVA
Dibromomethane	N.D	21.1	--	µg/L	1.5	3.0	20.0	106	72	139	4.18	20	08/15/17	01:29	NIVA
Dichlorodifluoromethane	N.D	24.4	--	µg/L	1.2	3.0	20.0	122	42	157	2.07	20	08/15/17	01:29	NIVA
Dichloromethane	N.D	18.4	--	µg/L	1.2	3.0	20.0	92.0	56	135	4.26	20	08/15/17	01:29	NIVA
Epichlorohydrin	N.D	406.6	--	µg/L	30.0	75.0	500	81.3	37	129	1.71	20	08/15/17	01:29	NIVA
Ethylbenzene	N.D	18.6	--	µg/L	1.2	3.0	20.0	93.0	58	136	13.1	20	08/15/17	01:29	NIVA
Hexachlorobutadiene	N.D	20.0	--	µg/L	1.4	3.0	20.0	100	62	124	3.05	20	08/15/17	01:29	NIVA
Iodomethane	N.D	BDL	Q	µg/L	8.0	15.0	100	0.00	45	148	N.C.	20	08/15/17	01:29	NIVA



## QUALITY CONTROL SUMMARY



Isopropylbenzene	N.D	19.5	--	µg/L	2.0	3.0	20.0	97.5	64	122	8.82	20	08/15/17	01:29	NIVA
Naphthalene	N.D	BDL	Q	µg/L	2.0	3.0	20.0	0.00	66	135	N.C.	20	08/15/17	01:29	NIVA
Styrene	N.D	N.D.	U	µg/L	1.2	3.0	20.0	0.00	65	123	N/A	20	08/15/17	01:29	NIVA
Tetrachloroethene	N.D	21.8	--	µg/L	1.2	3.0	20.0	109	64	138	2.27	20	08/15/17	01:29	NIVA
Tetrahydrofuran	N.D	21.4	--	µg/L	1.2	3.0	20.0	107	51	147	0.939	20	08/15/17	01:29	NIVA
Toluene	N.D	18.9	--	µg/L	1.2	3.0	20.0	94.5	65	140	16.1	20	08/15/17	01:29	NIVA
Toluene-d8-SURR	20.0	20.4	--	µg/L	N/A	N/A	20.00	102	77	122	N/A	N/A	08/15/17	01:29	NIVA
Trichloroethene	N.D	21.6	--	µg/L	1.2	3.0	20.0	108	76	126	5.41	20	08/15/17	01:29	NIVA
Trichlorofluoromethane	N.D	28.1	--	µg/L	1.5	3.0	20.0	141	60	144	1.07	20	08/15/17	01:29	NIVA
Vinyl Acetate	N.D	N.D.	U	µg/L	6.0	15.0	100	0.00	52	141	N/A	20	08/15/17	01:29	NIVA
Vinyl chloride	N.D	11.4	Q	µg/L	1.2	3.0	20.0	57.0	39	151	25.3	20	08/15/17	01:29	NIVA
cis-1,2-Dichloroethene	N.D	22.8	--	µg/L	1.2	3.0	20.0	114	66	127	0.438	20	08/15/17	01:29	NIVA
cis-1,3-Dichloropropene	N.D	19.0	--	µg/L	1.2	3.0	20.0	95.0	57	131	8.56	20	08/15/17	01:29	NIVA
m,p-Xylene	N.D	7.6	Q	µg/L	1.8	6.0	40.0	19.0	56	145	104	20	08/15/17	01:29	NIVA
n-Butylbenzene	N.D	17.6	--	µg/L	1.2	3.0	20.0	88.0	72	114	10.2	20	08/15/17	01:29	NIVA
n-Propylbenzene	N.D	17.7	--	µg/L	1.2	3.0	20.0	88.5	61	123	12.2	20	08/15/17	01:29	NIVA
o-Dichlorobenzene	N.D	19.6	--	µg/L	1.0	3.0	20.0	98.0	73	124	3.02	20	08/15/17	01:29	NIVA
o-Xylene	N.D	9.0	Q	µg/L	2.3	3.0	20.0	45.0	54	143	N.C.	20	08/15/17	01:29	NIVA
sec-Butylbenzene	N.D	19.4	--	µg/L	1.2	3.0	20.0	97.0	64	114	7.92	20	08/15/17	01:29	NIVA
tert-Butylbenzene	N.D	19.9	--	µg/L	1.2	3.0	20.0	99.5	68	113	6.80	20	08/15/17	01:29	NIVA
trans-1,2-Dichloroethene	N.D	23.6	--	µg/L	1.2	3.0	20.0	118	56	146	0.00	20	08/15/17	01:29	NIVA
trans-1,3-Dichloropropene	N.D	18.6	--	µg/L	1.2	3.0	20.0	93.0	59	130	7.75	20	08/15/17	01:29	NIVA
trans-1,4-Dichloro-2-butene	N.D	N.D	U	µg/L	6.0	15.0	100	0.00	47	129	N/A	20	08/15/17	01:29	NIVA

### 2712789 - LFB

Analyte Name	Reference Result	QC Result	DQ	Units	MDL	MRL	A/A	Rec. %	Accuracy		RPD	Precision		Analysis	
									Acceptance Criteria			Acceptance Criteria		Analysis	
									Low Limit	High Limit		High Limit	Date	Time	By
1,1,1,2-Tetrachloroethane	N/A	19.0	--	µg/L	1.2	3.0	20.0	95.0	67	126	N/A	N/A	08/15/17	02:00	NIVA
1,1,1-Trichloroethane	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	64	139	N/A	N/A	08/15/17	02:00	NIVA
1,1,2,2-Tetrachloroethane	N/A	19.8	--	µg/L	1.2	3.0	20.0	99.0	60	131	N/A	N/A	08/15/17	02:00	NIVA
1,1,2-Trichloroethane	N/A	20.6	--	µg/L	1.2	3.0	20.0	103	70	129	N/A	N/A	08/15/17	02:00	NIVA



## QUALITY CONTROL SUMMARY



1,1-Dichloroethane	N/A	21.0	--	µg/L	2.0	3.0	20.0	105	63	133	N/A	N/A	08/15/17	02:00	NIVA
1,1-Dichloroethene	N/A	20.4	--	µg/L	1.2	3.0	20.0	102	55	139	N/A	N/A	08/15/17	02:00	NIVA
1,1-Dichloropropene	N/A	20.1	--	µg/L	1.4	3.0	20.0	100	67	131	N/A	N/A	08/15/17	02:00	NIVA
1,2,3-Trichlorobenzene	N/A	19.7	--	µg/L	1.2	3.0	20.0	98.3	68	131	N/A	N/A	08/15/17	02:00	NIVA
1,2,3-Trichloropropane	N/A	20.2	--	µg/L	1.2	3.0	20.0	101	52	131	N/A	N/A	08/15/17	02:00	NIVA
1,2,4-Trichlorobenzene	N/A	19.3	--	µg/L	1.2	3.0	20.0	96.6	51	132	N/A	N/A	08/15/17	02:00	NIVA
1,2,4-Trimethylbenzene	N/A	19.4	--	µg/L	1.2	3.0	20.0	97.2	63	129	N/A	N/A	08/15/17	02:00	NIVA
1,2-Dibromo-3-chloropropane	N/A	20.5	--	µg/L	1.2	3.0	20.0	103	66	139	N/A	N/A	08/15/17	02:00	NIVA
1,2-Dibromoethane	N/A	20.7	--	µg/L	1.2	3.0	20.0	103	76	126	N/A	N/A	08/15/17	02:00	NIVA
1,2-Dichloroethane	N/A	20.3	--	µg/L	1.2	3.0	20.0	102	60	136	N/A	N/A	08/15/17	02:00	NIVA
1,2-Dichloropropane	N/A	20.0	--	µg/L	1.2	3.0	20.0	99.9	70	124	N/A	N/A	08/15/17	02:00	NIVA
1,3,5-Trimethylbenzene	N/A	19.7	--	µg/L	1.2	3.0	20.0	98.3	68	123	N/A	N/A	08/15/17	02:00	NIVA
1,3-Dichlorobenzene	N/A	19.1	--	µg/L	1.2	3.0	20.0	95.3	62	127	N/A	N/A	08/15/17	02:00	NIVA
1,3-Dichloropropane	N/A	20.7	--	µg/L	2.0	3.0	20.0	103	74	124	N/A	N/A	08/15/17	02:00	NIVA
1,4-Dichlorobenzene	N/A	18.8	--	µg/L	1.2	3.0	20.0	94.0	73	123	N/A	N/A	08/15/17	02:00	NIVA
1-Chlorohexane	N/A	18.7	--	µg/L	1.5	3.0	20.0	93.4	56	139	N/A	N/A	08/15/17	02:00	NIVA
2,2-Dichloropropane	N/A	14.8	--	µg/L	1.2	3.0	20.0	73.9	37	148	N/A	N/A	08/15/17	02:00	NIVA
2-Butanone	N/A	115.2	--	µg/L	6.0	15.0	100	115	57	136	N/A	N/A	08/15/17	02:00	NIVA
2-Chloroethyl vinyl ether	N/A	108.4	--	µg/L	6.0	15.0	100	108	47	143	N/A	N/A	08/15/17	02:00	NIVA
2-Chlorotoluene	N/A	19.2	--	µg/L	1.2	3.0	20.0	96.1	66	127	N/A	N/A	08/15/17	02:00	NIVA
2-Hexanone	N/A	111.9	--	µg/L	6.0	15.0	100	112	62	136	N/A	N/A	08/15/17	02:00	NIVA
4-Bromofluorobenzene-SURR	N/A	20.1	--	µg/L	N/A	N/A	20.0	101	79	121	N/A	N/A	08/15/17	02:00	NIVA
4-Chlorotoluene	N/A	19.3	--	µg/L	1.2	3.0	20.0	96.3	63	125	N/A	N/A	08/15/17	02:00	NIVA
4-Isopropyltoluene	N/A	19.5	--	µg/L	1.4	3.0	20.0	97.5	68	131	N/A	N/A	08/15/17	02:00	NIVA
4-Methyl-2-pentanone	N/A	112.0	--	µg/L	6.0	15.0	100	112	62	135	N/A	N/A	08/15/17	02:00	NIVA
Acetone	N/A	106.3	--	µg/L	6.0	15.0	100	106	46	142	N/A	N/A	08/15/17	02:00	NIVA
Acrolein	N/A	500.2	--	µg/L	25.0	75.0	500	100	40	153	N/A	N/A	08/15/17	02:00	NIVA
Acrylonitrile	N/A	113.6	--	µg/L	6.0	15.0	100	114	53	141	N/A	N/A	08/15/17	02:00	NIVA
Benzene	N/A	20.3	--	µg/L	1.2	3.0	20.0	102	66	131	N/A	N/A	08/15/17	02:00	NIVA
Bromobenzene	N/A	19.2	--	µg/L	1.2	3.0	20.0	96.1	61	126	N/A	N/A	08/15/17	02:00	NIVA
Bromochloromethane	N/A	21.5	--	µg/L	1.2	3.0	20.0	107	60	133	N/A	N/A	08/15/17	02:00	NIVA
Bromodichloromethane	N/A	20.0	--	µg/L	1.2	3.0	20.0	100	72	129	N/A	N/A	08/15/17	02:00	NIVA



## QUALITY CONTROL SUMMARY



Bromoform	N/A	19.0	--	µg/L	1.2	3.0	20.0	95.0	61	130	N/A	N/A	08/15/17	02:00	NIVA
Bromomethane	N/A	20.4	--	µg/L	2.0	3.0	20.0	102	47	151	N/A	N/A	08/15/17	02:00	NIVA
Carbon disulfide	N/A	102.4	--	µg/L	7.0	15.0	100	102	58	140	N/A	N/A	08/15/17	02:00	NIVA
Carbon tetrachloride	N/A	20.6	--	µg/L	1.2	3.0	20.0	103	69	134	N/A	N/A	08/15/17	02:00	NIVA
Chlorobenzene	N/A	19.1	--	µg/L	1.2	3.0	20.0	95.6	67	122	N/A	N/A	08/15/17	02:00	NIVA
Chloroethane	N/A	17.9	--	µg/L	1.2	3.0	20.0	89.6	47	144	N/A	N/A	08/15/17	02:00	NIVA
Chloroform	N/A	20.6	--	µg/L	1.2	3.0	20.0	103	61	134	N/A	N/A	08/15/17	02:00	NIVA
Chloromethane	N/A	22.4	--	µg/L	1.2	3.0	20.0	112	43	142	N/A	N/A	08/15/17	02:00	NIVA
Dibromochloromethane	N/A	20.1	--	µg/L	1.2	3.0	20.0	101	69	134	N/A	N/A	08/15/17	02:00	NIVA
Dibromofluoromethane-SURR	N/A	20.0	--	µg/L	N/A	N/A	20.0	100	83	120	N/A	N/A	08/15/17	02:00	NIVA
Dibromomethane	N/A	20.6	--	µg/L	1.5	3.0	20.0	103	76	131	N/A	N/A	08/15/17	02:00	NIVA
Dichlorodifluoromethane	N/A	22.1	--	µg/L	1.2	3.0	20.0	111	49	145	N/A	N/A	08/15/17	02:00	NIVA
Dichloromethane	N/A	21.7	--	µg/L	1.2	3.0	20.0	109	62	129	N/A	N/A	08/15/17	02:00	NIVA
Epichlorohydrin	N/A	515.3	--	µg/L	30.0	75.0	500	103	52	134	N/A	N/A	08/15/17	02:00	NIVA
Ethylbenzene	N/A	19.6	--	µg/L	1.2	3.0	20.0	98.0	69	131	N/A	N/A	08/15/17	02:00	NIVA
Hexachlorobutadiene	N/A	19.4	--	µg/L	1.4	3.0	20.0	97.1	51	139	N/A	N/A	08/15/17	02:00	NIVA
Iodomethane	N/A	99.0	--	µg/L	8.0	15.0	100	99.0	54	143	N/A	N/A	08/15/17	02:00	NIVA
Isopropylbenzene	N/A	20.0	--	µg/L	2.0	3.0	20.0	99.8	69	121	N/A	N/A	08/15/17	02:00	NIVA
Naphthalene	N/A	20.6	--	µg/L	2.0	3.0	20.0	103	71	134	N/A	N/A	08/15/17	02:00	NIVA
Styrene	N/A	19.5	--	µg/L	1.2	3.0	20.0	97.6	65	127	N/A	N/A	08/15/17	02:00	NIVA
Tetrachloroethene	N/A	20.3	--	µg/L	1.2	3.0	20.0	101	62	135	N/A	N/A	08/15/17	02:00	NIVA
Tetrahydrofuran	N/A	21.1	--	µg/L	1.2	3.0	20.0	105	67	134	N/A	N/A	08/15/17	02:00	NIVA
Toluene	N/A	20.6	--	µg/L	1.2	3.0	20.0	103	59	143	N/A	N/A	08/15/17	02:00	NIVA
Toluene-d8-SURR	N/A	20.4	--	µg/L	N/A	N/A	20.0	102	80	116	N/A	N/A	08/15/17	02:00	NIVA
Trichloroethene	N/A	20.6	--	µg/L	1.2	3.0	20.0	103	67	138	N/A	N/A	08/15/17	02:00	NIVA
Trichlorofluoromethane	N/A	25.5	--	µg/L	1.5	3.0	20.0	128	45	157	N/A	N/A	08/15/17	02:00	NIVA
Vinyl Acetate	N/A	93.1	--	µg/L	6.0	15.0	100	93.1	53	144	N/A	N/A	08/15/17	02:00	NIVA
Vinyl chloride	N/A	22.1	--	µg/L	1.2	3.0	20.0	111	52	140	N/A	N/A	08/15/17	02:00	NIVA
cis-1,2-Dichloroethene	N/A	21.1	--	µg/L	1.2	3.0	20.0	106	71	128	N/A	N/A	08/15/17	02:00	NIVA
cis-1,3-Dichloropropene	N/A	19.4	--	µg/L	1.2	3.0	20.0	97.1	63	125	N/A	N/A	08/15/17	02:00	NIVA
m,p-Xylene	N/A	39.8	--	µg/L	1.8	6.0	40.0	99.4	63	130	N/A	N/A	08/15/17	02:00	NIVA
n-Butylbenzene	N/A	19.1	--	µg/L	1.2	3.0	20.0	95.7	67	127	N/A	N/A	08/15/17	02:00	NIVA



## QUALITY CONTROL SUMMARY



n-Propylbenzene	N/A	19.7	--	µg/L	1.2	3.0	20.0	98.5	64	124	N/A	N/A	08/15/17	02:00	NIVA
o-Dichlorobenzene	N/A	19.1	--	µg/L	1.0	3.0	20.0	95.7	75	121	N/A	N/A	08/15/17	02:00	NIVA
o-Xylene	N/A	19.4	--	µg/L	2.3	3.0	20.0	97.1	66	124	N/A	N/A	08/15/17	02:00	NIVA
sec-Butylbenzene	N/A	19.8	--	µg/L	1.2	3.0	20.0	99.2	66	122	N/A	N/A	08/15/17	02:00	NIVA
tert-Butylbenzene	N/A	19.8	--	µg/L	1.2	3.0	20.0	98.8	65	126	N/A	N/A	08/15/17	02:00	NIVA
trans-1,2-Dichloroethene	N/A	20.8	--	µg/L	1.2	3.0	20.0	104	66	129	N/A	N/A	08/15/17	02:00	NIVA
trans-1,3-Dichloropropene	N/A	19.2	--	µg/L	1.2	3.0	20.0	96.2	60	131	N/A	N/A	08/15/17	02:00	NIVA
trans-1,4-Dichloro-2-butene	N/A	90.6	--	µg/L	6.0	15.0	100	90.6	53	123	N/A	N/A	08/15/17	02:00	NIVA



## QUALITY CONTROL SUMMARY



### Footnotes:

#### **Data Qualifiers (DQ) to be used by EQLab are listed below:**

**B** – Analyte was detected in the blank.

**D** – Diluted Sample.

**J** – The reported result is an estimated value (e.g., matrix interference was observed or the analyte was detected at a concentration outside the quantitation range and/or final result was found between MDL and MRL).

**N** – Non-target analyte.

**P** – Does not meet preservation criteria (e.g. does not meet arrival temperature criteria or acid/base preservation criteria or incorrect container, among others).

**Q** – One or more quality control criteria failed (e.g., fails in Holding Time, LFB/LCS recovery, surrogate (SURR) spike recovery, matrix spike recovery or CCV recovery, out of RPD acceptance criteria among other).

**R** – Recognition Level. ND Results are reported “<PTRL” – Pattern Recognition Level (applicable for EPA 508 (PCB) mixtures (Aroclors), Toxaphene, and Chlordane only).

**T** – Thomas Formula (applicable for Microbiology testing only). The combination of positives tubes did not appear in Table 9221.IV. SM 9221C “Estimation of Bacterial Density”

**U** – Analyte was not detected and is reported as less than the MDL or as defined by the client. The MDL has been adjusted for any dilution or concentration of the sample.

### **Definitions:**

A / A – Amount Added

ASTM – American Society for Testing and Materials

BDL – Below Detection Limit

CCB – Continues Calibration Blank

CCV – Continues Calibration Verification

DNI – Does not Ignite

DQ – Data Qualifiers

DUP – Duplicate

LRB – Laboratory Reagent Blank

MB – Method Blank

MCL – Maximum Contaminant Level

MDL – Method Detection Limit

MO – Monitoring Only

MRL – Minimum Reporting Limit

MS – Matrix Spike



## QUALITY CONTROL SUMMARY



EB/ ERB – Equipment Blank / Equipment Reagent Blank  
EPA – Environmental Protection Agency  
EQLab – Environmental Quality Laboratories, Inc.  
FB – Field Blank  
FD – Field Duplicate  
FRB – Field Reagent Blank  
ICB – Initial Calibration Blank  
ICV – Initial Calibration Verification  
LCS – Laboratory Control Sample  
LFB – Laboratory Fortified Blank  
LFBD – Laboratory Fortified Blank Duplicate

MSD – Matrix Spike Duplicate  
N/A – Not Applicable  
N.D. – Not Detected  
NELAC – National Environmental Laboratory Accreditation Conference  
PRDOH – Puerto Rico Department of Health  
PTRL – Pattern Recognition Level  
TB – Trip Blank  
Rec. – Recovery  
RPD – Relative Percent Difference  
SM – Standard Method  
SURR – Surrogate

### Formulas:

1. The Relative Percent Difference (RPD) is calculated as follows:

$$RPD = \left\{ \left[ \frac{\text{QC Final Result} - \text{Reference Final Result}}{\text{QC Final Result} + \text{Reference Final Result}} \right] \right\} \times 100$$

$$RPD \text{ Micro} = (\log_{10} \text{QC Final Result}) - (\log_{10} \text{Reference Final Result}) \quad (\text{Expressed as Precision})$$

The RPD applies to the following Quality Controls: DUP, MSD, LFBD. The RPD is reported N.C. when the QC Final Result is less than ten times the value of MDL. The RPD general acceptance criteria is as close to zero as possible; no more than 20% for all matrices except Solid / Soil which is < or = 40%.

2. The Recovery Percentage (% Rec) is calculated as follows:

$$\% \text{Rec} = \left[ \frac{\text{QC Final Result}}{\text{QC Fortified Concentration}} \right] \times 100$$

3. For the MS and MSD Quality Controls, the Recovery Percentage (% Rec) is calculated as follows:

$$\% \text{Rec} = \left[ \frac{\text{QC Final Result} - \text{Reference Final Result}}{\text{QC Fortified Concentration}} \right] \times 100$$



**APPENDIX A**  
**CHAIN OF CUSTODY DOCUMENTATION**

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**  
**SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY**

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

M- 37361

LIMS # 2017-06945

CLIENT NAME: Arcadis Caribe  
P.O. #:

CLIENT ID: 655-04  
PWSID #:

W.O. #: 26  
FOLDER #: 236939

SITE: Guayama P.R.  
PROJECT:

CLIENT REP: Elvin varez  
EQLAB REP:

SAMPLE INFORMATION		CONTAINER INFORMATION			FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: <u>2710179</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B V2
MATRIX: <u>DI WATER</u>	TIME: <u>0800</u>	<u>vial</u>		<u>40 ml</u>		
SOURCE: <u>TB-20170801</u>	TYPE: <u>Grab</u>	PRESERVATIVE				
		<u>HCL</u>				
SAMPLE #: <u>2710173</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B VOL
MATRIX: <u>Ground water</u>	TIME: <u>0745</u>	<u>Vial</u>		<u>40 ml</u>		
SOURCE: <u>INF-20170801</u>	TYPE: <u>Grab</u>	PRESERVATIVE				
		<u>HCL</u>				
SAMPLE #: <u>2710174</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B VOL
MATRIX: <u>Ground water</u>	TIME: <u>0838</u>	<u>Vial</u>		<u>40 ml</u>		
SOURCE: <u>EFF-20170801</u>	TYPE: <u>Grab</u>	PRESERVATIVE				
		<u>HCL</u>				
SAMPLE #: <u>2710170</u>	DATE: <u>08/01/17</u>	TYPE	COLOR	VOLUME		EPA 8260B VOL
MATRIX: <u>Ground water</u>	TIME: <u>0838</u>	<u>Vial</u>		<u>40 ml</u>		
SOURCE: <u>EFFDUP-20170801</u>	TYPE: <u>Grab</u>	PRESERVATIVE				
		<u>HCL</u>				

CUSTODY RECORD	SIGNATURE	DATE	TIME	SPECIAL INSTRUCTIONS / COMMENTS:
Collected in field by:	<u>Andrés Colón</u>	<u>08/01/17</u>		
Fixed in field by:	<u>Andrés Colón</u>	<u>08/01/17</u>	<u>VARIAS</u>	
Authorized by:	<u>N/A</u>	<u>N/A</u>		
Received by EQLF:	<u>N/A</u>	<u>N/A</u>		
Released to EQLL by:	<u>[Signature]</u>	<u>08/01/17</u>	<u>1636</u>	
Received by EQLL:	<u>[Signature]</u>	<u>08/01/17</u>	<u>1636</u>	

\*EQLF = Eqlabs' Field Personnel.  
\*EQLL = Eqlabs' Log-in Personnel.

PJARR

Arrival Temperature: 3.0°C Signature: [Signature]  
Eqlabs' general terms and conditions on reverse side of this document.

**ENVIRONMENTAL QUALITY LABORATORIES, INC.**  
**SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY**

PQ BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

M-07385

LIMS # 2017-06945

CLIENT NAME: Arcata Caribe  
P.O. #:

CLIENT ID: 655-04 W.O. #: 26  
PWSID #: FOLDER #: 936929

SITE: Guajon a PB  
PROJECT:

CLIENT REP: Elvin Varela  
EQLAB REP: E. Garcia

SAMPLE INFORMATION		CONTAINER INFORMATION			FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: <u>2710171</u>	DATE: <u>08/01/17</u>	TYPE: <u>vial</u>	COLOR:	VOLUME: <u>40 ml</u>		EPA 8260B VOL
MATRIX: <u>Ground water</u>	TIME: <u>0838</u>					
SOURCE: <u>EFF MS - 20104601</u>	TYPE: <u>grab</u>	PRESERVATIVE: <u>HCL</u>				
SAMPLE #: <u>2710172</u>	DATE: <u>08/01/17</u>	TYPE: <u>vial</u>	COLOR:	VOLUME: <u>40 ml</u>		EPA 8260B VOL
MATRIX: <u>Ground water</u>	TIME: <u>0838</u>					
SOURCE: <u>EFF MSB - 20104601</u>	TYPE: <u>grab</u>	PRESERVATIVE: <u>HCL</u>				
SAMPLE #:	DATE:	TYPE:	COLOR:	VOLUME:	<u>N</u> <u>A</u>	
MATRIX:	TIME:	PRESERVATIVE:				
SOURCE:	TYPE:					
SAMPLE #:	DATE:	TYPE:	COLOR:	VOLUME:		
MATRIX:		PRESERVATIVE:				
SOURCE:	TYPE:					
CUSTODY RECORD	SIGNATURE	DATE	TIME	SPECIAL INSTRUCTIONS / COMMENTS:		
Collected in field by:	<u>Andr Colom</u>	<u>08/01/17</u>	<u>0838</u>			
Fixed in field by:	<u>Andr Colom</u>	<u>08/01/17</u>	<u>0838</u>			
Authorized by:	<u>N/A</u>		<u>N/A</u>			
Received by EQLF:	<u>N/A</u>		<u>N/A</u>			
Released to EQLL by:	<u>AM</u>	<u>08/01/17</u>	<u>1636</u>			
Received by EQLL:	<u>Lupe Garcia</u>	<u>08/01/17</u>	<u>1636</u>			

\*EQLF = Eqlabs' Field Personnel.  
\*EQLL = Eqlabs' Log-in Personnel.

Arrival Temperature: 3.0°C Signature: AR  
PIAR Eqlabs' general terms and conditions on reverse side of this document.

**APPENDIX B**  
**RAW DATA WORKSHEETS**

## ORGANICS DEPARTMENT RAW DATA PACKAGE CHECKLIST

RUN NUMBER: 190632

- 1. Run Cover Sheet general information check.
- 2. Check if the reagents and / or support equipment information are on the Pre-Run Worksheet.
- 3. Check if the Pre-Run Worksheet and the Run Cover Sheet are signed.
- 4. Check for the presence of:

Present	Not Applicable	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	a. Markers
<input type="checkbox"/>	<input checked="" type="checkbox"/>	b. Pesticides Degradation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	c. Calculated LPC
<input checked="" type="checkbox"/>	<input type="checkbox"/>	d. BFB
<input type="checkbox"/>	<input checked="" type="checkbox"/>	e. Tailing Factor
<input type="checkbox"/>	<input checked="" type="checkbox"/>	f. Height of Valley
<input type="checkbox"/>	<input checked="" type="checkbox"/>	g. Bromoform Degradation
<input checked="" type="checkbox"/>	<input type="checkbox"/>	h. %RFD
<input type="checkbox"/>	<input checked="" type="checkbox"/>	i. DFTPP
<input type="checkbox"/>	<input checked="" type="checkbox"/>	j. Other: <u>N/A</u>

- 5. Check for the attachment of the LIMS Run Worksheet.
- 6. Check for the attachment of the Initial Calibration and its RSD or Lineal Correlation calculation, if applicable.

Prepared by: N/A  
Analyst

Date: N/A

Checked by: [Signature]  
Laboratory Group Leader

Date: 08/15/17

Approved by: [Signature]  
Supervisor

Date: 08/16/17

# ORGANICS DEPARTMENT RUN COVERSHEET



Method Number	Run Number	Sequence Number	Sample prep by	Sample Setup by	Sample Evaluated by	Run Approved by
8260 VOC	190632	190632CC	NIVA PR58840	NIVA	NIVA	NIVA

Calib. Curve Name	NBK Reference	Description/Identification Number
8260VOC-AGO-LIQ-17	NBK079Pg071	V8-AG7890MS
		PM Expiration Date: <b>May-18</b>

<input checked="" type="checkbox"/> LRB	<input type="checkbox"/> BFB / LPC	<input type="checkbox"/> DFTPP / Degradation	<input checked="" type="checkbox"/> ICV / CCS	<input type="checkbox"/> QCS	<input type="checkbox"/> CCV / CCS	<input type="checkbox"/> PT
Amount $\mu$ L	Solution Name	NBK Reference	Expiration Date	Solution Concentration ppm	Dilution Volume mL	Analyte Concentration ppb
N/A	VOC'S WATER	NBK079Pg068	N/A	N/A	N/A	N/A
5	SIM VOC 8260/624	NBK079Pg063	01/17/18	20	5	20
10	MIX 8260	NBK079Pg065	01/24/18	100	50	20
10	MIX 8260 GASES	NBK079Pg071	09/15/17	100	50	20

<input type="checkbox"/> MB	<input checked="" type="checkbox"/> MDL	<input type="checkbox"/> MRL	<input checked="" type="checkbox"/> MS / LFM	<input checked="" type="checkbox"/> MSD / LFMD	<input checked="" type="checkbox"/> LFB	<input type="checkbox"/> LFB D
Amount	Solution Name	NBK Reference	Expiration Date	Solution Concentration ppm	Dilution Volume mL	Analyte Concentration ppb
N/A	VOC'S WATER	NBK079Pg068	N/A	N/A	N/A	N/A
0.5	MIX 8260	NBK079Pg065	01/24/18	100	50	1
0.5	MIX 8260 GASES	NBK079Pg071	09/15/17	100	50	1
10	MIX 8260	NBK079Pg065	01/24/18	100	50	20
10	MIX 8260 GASES	NBK079Pg071	09/15/17	100	50	20

SOP-QC-004 Accepted Exemption:

<input type="checkbox"/> #1	<input type="checkbox"/> #2	<input type="checkbox"/> #3	<input type="checkbox"/> #4	<input type="checkbox"/> #5
<input type="checkbox"/> #6	<input checked="" type="checkbox"/> #7	<input type="checkbox"/> #8	<input type="checkbox"/> #9	<input type="checkbox"/> #10
<input type="checkbox"/> #11	<input type="checkbox"/> #12	<input type="checkbox"/> #13	<input type="checkbox"/> #14	

**Analysts Comments:**  
 Run and Preparation Controls are within established criteria for method. Positive samples were confirmed using ion spectrums (MS).  
 2ND SOURCE DATA FILE: DATA\8260LIQ-JULCCVCC82612.D NBK REF: 079 Pg.065 EXP: 01/24/18  
 Niveles descartados en la curva de calibración no cumple con el criterio de RFD<15% del ICAL AVE RF según el SOP GN002 Ap.1.  
**Manual integration reasons legend:**  
 1- Poor integration by the computer data System.  
 2- Over-integration of peak due to noisy baseline.  
 3- Abnormal peak shapes that were not integrated completely.  
 4- Due to (RT) retention time variation.

**Supervisor Comments:** *Spichardo 08/16/17* *Hayes 08-15-17*

**QA/QC Comments:**

Method Path : D:\MassHunter\GCMS\1\methods\  
 Method File : 8260VOC-AGO-LIQ-17.M  
 Title : Analysis of VOC'S by 8260B,624  
 Last Update : Tue Aug 15 13:42:40 2017  
 Response Via : Initial Calibration

Calibration Files

1 =CC82602.D 2 =CC82603.D 3 =CC82604.D 4 =CC82605.D 5 =CC82606.D 6 =CC82607.D 7 =CC82608.D 8 =CC826

01.D

Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1) I IPENTAFLUOROBENZENE										
2) M DICLIDIFLUOROME...	1.085	0.966				1.101	1.244	1.031	1.085	9.49
3) P,T CHLOROMETHANE	1.124	1.034				1.033	1.191	1.103	1.097	6.06
4) C,T VINYL CHLORIDE	1.143	1.055				1.153	1.297	1.113	1.152	7.76
5) T BROMOMETHANE	0.381	0.390	0.395	0.367	0.410			0.386	0.386	4.09
6) T CHLOROETHANE	0.640	0.582	0.509	0.505	0.476			0.643	0.559	12.98
7) T TRICLFLUOROMET...	1.319	1.197	1.133	0.863		1.210		1.290	1.169	14.02
8) T ACROLEIN	0.130	0.128	0.168	0.138	0.123	0.109	0.112	0.113	0.128	14.93
9) T ACETONE	0.204	0.184	0.229	0.200	0.167	0.163	0.165	0.235	0.193	14.71
10) C,T 11-DICHLOROETHENE	1.051	0.997	1.280	0.996	1.047	1.007	1.061		1.063	9.37
11) T IODOMETHANE	1.241	1.253	1.688	1.408	1.329	1.172	1.384		1.354	12.51
12) T CARBON DISULFIDE	1.793	1.599	2.291	1.829	1.672	1.580	1.565	1.538	1.733	14.38
13) T ACRYLONITRILE	0.374	0.367	0.457	0.380	0.360	0.339	0.374	0.321	0.372	10.71
14) T DICHLOROMETHANE	1.185	0.996	1.211	1.040	1.036	0.871	0.913		1.036	12.26
15) T TRANS12DICLETHENE	0.820	0.779	1.026	0.823	0.824	0.786	0.855	0.683	0.825	11.71
16) P,T 11-DICHLOROETHANE	1.487	1.414	1.862	1.525	1.504	1.420	1.548	1.250	1.501	11.55
17) VINYL ACETATE	1.234	1.238	1.678	1.361	1.305	1.164	1.204	1.058	1.280	14.41
18) 2-BUTANONE	0.381	0.374	0.473	0.399	0.369	0.348	0.380	0.327	0.382	11.29
19) T CIS12DICHLOROE...	1.042	1.026	1.338	1.098	1.082	1.020	1.093	0.940	1.080	10.77
20) T 22-DICHLOROPRO...	1.118	1.030	1.446	1.170	1.179	1.123	1.315	0.903	1.161	14.28
21) C,T CHLOROFORM	1.879	1.740	2.213	1.782	1.733	1.609	1.740	1.911	1.826	9.97
22) T BROMOCHLOROMET...	0.758	0.889	1.094	0.880	0.857	0.799	0.893	0.710	0.860	13.48
23) I I14-DIFLUOROBENZENE										
24) S SDIBRFLUOROMET...	0.284	0.283	0.281	0.280	0.277	0.269	0.264	0.291	0.279	3.07
25) T TETRAHYDROFURAN	0.130	0.123	0.151	0.129	0.122	0.116	0.126	0.122	0.127	8.30
26) T 111-TRICHLOROE...	0.640	0.574	0.796	0.656	0.664	0.636	0.681	0.517	0.646	12.57
27) T 11-DICHLOROPRO...	0.564	0.513	0.726	0.593	0.596	0.559	0.591	0.508	0.581	11.68
28) T 12-DICHLOROETHANE	0.652	0.625	0.766	0.621	0.601	0.554	0.583	0.576	0.622	10.59
29) T CARBONTETRACHL...	0.509	0.454	0.651	0.546	0.568	0.544	0.563	0.399	0.529	14.44
30) T BENZENE	1.869	1.755	2.241	1.833	1.801	1.649	1.668	1.616	1.804	11.01
31) T TRICHLOROETHENE	0.527	0.491	0.641	0.528	0.531	0.504	0.539	0.430	0.524	11.26
32) C,T 12-DICHLOROPRO...	0.473	0.459	0.590	0.484	0.482	0.457	0.488	0.431	0.483	9.73
33) T DIBROMOMETHANE	0.375	0.366	0.454	0.380	0.379	0.361	0.408	0.312	0.379	10.69
34) T BROMODICLMEthane	0.642	0.624	0.791	0.650	0.651	0.618	0.666	0.559	0.650	10.10
35) T 2-CLETHYLVINYL...	0.327	0.326	0.415	0.347	0.338	0.312	0.310	0.278	0.331	11.96

Method Path : D:\MassHunter\GCMS\1\methods\

Method File : 8260VOC-AGO-LIQ-17.M

36) T	EPICHLOROHYDRIN	0.035	0.044	0.038	0.037	0.036	0.040	0.030	0.037#	11.21
37) T	4METHYL-2-PENT...	0.439	0.423	0.527	0.442	0.415	0.369	0.361	0.363	13.35
38) T	CIS13DICLPROPENE	0.707	0.692	0.903	0.756	0.773	0.736	0.792	0.610	11.39
39) S	STOLUENE-D8	1.276	1.277	1.271	1.273	1.272	1.256	1.237	1.266	1.06
40) C,T	TOLUENE	2.122	2.018	2.619	2.126	2.083	1.905	1.880	1.842	11.88
41) T	TRANS13DICLPRO...	0.558	0.560	0.733	0.617	0.648	0.631	0.699	0.479	13.33
42) T	112-TRICHLOROE...	0.488	0.471	0.588	0.482	0.478	0.452	0.492	0.430	9.52
43) T	2-HEXANONE	0.293	0.286	0.364	0.309	0.292	0.267	0.270	0.245	12.26
44) T	13-DICHLOROPRO...	0.858	0.831	1.037	0.854	0.837	0.784	0.840	0.747	10.02
45) T	DIBRCHLOROMETHANE	0.501	0.492	0.631	0.523	0.538	0.521	0.579	0.431	11.30
46) T	TETRACHLOROETHENE	0.558	0.494	0.686	0.562	0.567	0.537	0.580	0.435	13.08
47) T	12-DIBROMOETHANE	0.473	0.472	0.597	0.494	0.492	0.470	0.520	0.419	10.38
-----ISTD-----										
48) I	CHLOROBENZEN-d5-IS									
49) P,T	CHLOROBENZENE	0.982	0.942	1.202	0.964	0.952	0.893	0.935	0.891	10.20
50) T	1-CHLOROHXANE	0.421	0.379	0.528	0.429	0.442	0.425	0.463	0.348	12.50
51) T	1112-TETRACLET...	0.318	0.312	0.399	0.326	0.331	0.319	0.345	0.276	10.61
52) C,T	ETHYLBENZENE	1.632	1.522	2.013	1.622	1.590	1.456	1.405	1.357	12.94
53) T	MP-XYLENE	1.269	1.177	1.544	1.242	1.210	1.075	0.966	1.044	14.88
54) T	STYRENE	1.072	1.057	1.353	1.103	1.090	1.025	1.057	0.891	11.87
55) T	O-XYLENE	1.294	1.236	1.598	1.297	1.280	1.197	1.219	1.081	11.62
56) P,T	BROMOFORM	0.227	0.222	0.290	0.246	0.254	0.257	0.297	0.200	13.34
57) P,T	1122-TETRACLET...	0.432	0.423	0.536	0.441	0.427	0.411	0.440	0.383	10.16
58) T	ISOPROPYL BENZENE	1.509	1.421	1.932	1.572	1.553	1.438	1.419	1.179	14.09
59) S	S4BRFLUOROBENZENE	0.560	0.559	0.562	0.565	0.569	0.575	0.591	0.556	2.00
60) T	123-TRICLPROPANE	0.143	0.137	0.170	0.142	0.136	0.131	0.139	0.130	9.07
61) T	TRANS14DICL2BU...	0.086	0.084	0.109	0.091	0.088	0.083	0.086	0.074	11.33
62) T	BROMOBENZENE	0.647	0.629	0.794	0.646	0.639	0.609	0.660	0.531	11.26
63) T	N-PROPYLBENZENE	1.849	1.734	2.316	1.884	1.863	1.713	1.678	1.454	13.62
64) T	2-CHLOROTOLUENE	1.075	1.018	1.309	1.058	1.044	0.987	1.036	0.931	10.53
65) T	4-CHLOROTOLUENE	1.282	1.218	1.563	1.269	1.254	1.180	1.224	1.092	10.83
66) T	135TRIMETHYLBE...	1.333	1.280	1.690	1.373	1.362	1.272	1.277	1.079	12.81
67) T	TERT-BUTYLBENZENE	1.088	1.013	1.371	1.122	1.118	1.058	1.108	0.837	13.52
68) T	124TRIMETHYLBE...	1.312	1.261	1.628	1.321	1.321	1.236	1.263	1.083	11.69
69) T	SEC-BUTYLBENZENE	1.520	1.412	1.920	1.563	1.569	1.455	1.455	1.182	13.67
70) T	13-DICHLOROBEN...	0.798	0.779	0.977	0.794	0.794	0.760	0.808	0.715	9.48
-----ISTD-----										
71) I	I14-DICLBENZENE-D4									
72) T	4-ISOPROPYLTOL...	1.855	1.749	2.355	1.908	1.895	1.728	1.731	1.443	14.03
73) T	14-DICHLOROBEN...	1.129	1.088	1.345	1.092	1.075	1.005	1.065	1.107	9.26
74) T	12-DICHLOROBEN...	1.095	1.065	1.317	1.069	1.046	0.972	1.010	0.986	10.14
75) T	N-BUTYLBENZENE	1.626	1.507	2.030	1.658	1.653	1.505	1.528	1.283	13.28
76) T	12-DIBR-3CLPRO...	0.114	0.108	0.142	0.123	0.122	0.119	0.133	0.085	14.61
77) T	124-TRICLBENZENE	0.731	0.730	0.914	0.757	0.754	0.688	0.747	0.669	9.85
78) T	NAPHTHALENE	1.624	1.619	2.044	1.717	1.647	1.487	1.541	1.378	12.06
79) T	HEXACHLOROBUTA...	0.264	0.246	0.324	0.267	0.265	0.245	0.268	0.224	11.15
80) T	123-TRICLBENZENE	0.659	0.652	0.808	0.667	0.653	0.596	0.653	0.591	10.08

Method Path : D:\MassHunter\GCMS\1\methods\  
Method File : 8260VOC-AGO-LIQ-17.M

-----  
(#) = Out of Range

Calibration Status Report 5977B

Method Path : D:\MassHunter\GCMS\1\methods\  
 Method File : 8260VOC-AGO-LIQ-17.M  
 Title : Analysis of VOC'S by 8260B,624  
 Last Update : Tue Aug 15 13:42:40 2017  
 Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	3	20	D:\MassHunter\GCMS\1\data\190632CC\CC82602.D
2	2	5	20	D:\MassHunter\GCMS\1\data\190632CC\CC82603.D
3	3	10	20	D:\MassHunter\GCMS\1\data\190632CC\CC82604.D
4	4	20	20	D:\MassHunter\GCMS\1\data\190632CC\CC82605.D
5	5	50	20	D:\MassHunter\GCMS\1\data\190632CC\CC82606.D
6	6	100	20	D:\MassHunter\GCMS\1\data\190632CC\CC82607.D
7	7	200	20	D:\MassHunter\GCMS\1\data\190632CC\CC82608.D
8	8	1	20	D:\MassHunter\GCMS\1\data\190632CC\CC82601.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Aug 14 17:03 2017	Aug 14 16:48 2017	14 Aug 2017 12:58 pm
2	2	Aug 14 17:10 2017	Aug 14 17:07 2017	14 Aug 2017 01:27 pm
3	3	Aug 14 17:11 2017	Aug 14 16:50 2017	14 Aug 2017 01:57 pm
4	4	Aug 14 17:11 2017	Aug 14 16:51 2017	14 Aug 2017 02:26 pm
5	5	Aug 14 17:11 2017	Aug 14 16:52 2017	14 Aug 2017 02:56 pm
6	6	Aug 14 17:11 2017	Aug 14 16:57 2017	14 Aug 2017 03:26 pm
7	7	Aug 14 17:11 2017	Aug 14 16:58 2017	14 Aug 2017 03:56 pm
8	8	Aug 14 17:02 2017	Aug 14 16:48 2017	14 Aug 2017 12:27 pm

8260VOC-AGO-LIQ-17.M Tue Aug 15 13:45:01 2017

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063201.D  
 Acq On : 14 Aug 2017 04:57 pm  
 Operator : NIVA  
 Sample : LRB/2712780  
 Misc : RUN190632  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 15 13:45:17 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.836	168	625290	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.815	114	1274110	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.564	117	1833722	20.00	µg/L	0.00
71) I14-DICLBENZENE-D4	16.308	152	1331327	20.00	µg/L	0.00

System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.853	111	360143	20.28	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	101.40%	
39) STOLUENE-D8	8.993	98	1599462	19.83	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.15%	
59) S4BRFLUOROBENZENE	13.893	95	1037734	19.95	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.75%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) DICLDIFLUOROMETHANE	1.935	85	6746	N.D.		
3) CHLOROMETHANE	2.138	50	5122	N.D.		
4) VINYL CHLORIDE	2.262	62	1046	N.D.		
5) BROMOMETHANE	0.000		0	N.D.	d	
6) CHLOROETHANE	2.624	64	1470	N.D.		
7) TRICLFLUOROMETHANE	2.844	101	6091	N.D.		
8) ACROLEIN	0.000		0	N.D.	d	
9) ACETONE	0.000		0	N.D.	d	
10) 11-DICHLOROETHENE	4.104	61	3849	N.D.		
11) IODOMETHANE	0.000		0	N.D.	d	
12) CARBON DISULFIDE	0.000		0	N.D.	d	
13) ACRYLONITRILE	4.177	53	2544	N.D.		
14) DICHLOROMETHANE	0.000		0	N.D.	d	
15) TRANS12DICLETHENE	4.121	96	3847	N.D.		
16) 11-DICHLOROETHANE	4.116	63	1573	N.D.		
17) VINYL ACETATE	4.609	43	737	N.D.		
18) 2-BUTANONE	5.306	43	512	N.D.		
19) CIS12DICHLOROETHENE	5.248	96	1741	N.D.		
20) 22-DICHLOROPROPANE	5.217	77	933	N.D.		
21) CHLOROFORM	5.641	83	4955	N.D.		
22) BROMOCHLOROMETHANE	5.560	49	465	N.D.		
25) TETRAHYDROFURAN	5.658	42	31	N.D.		
26) 111-TRICHLOROETHANE	5.808	97	1721	N.D.		
27) 11-DICHLOROPROPENE	0.000		0	N.D.	d	
28) 12-DICHLOROETHANE	6.391	62	1249	N.D.		
29) CARBONTETRACHLORIDE	5.992	117	1978	N.D.		
30) BENZENE	6.288	78	10459	N.D.		
31) TRICHLOROETHENE	7.164	132	3007	N.D.		
32) 12-DICHLOROPROPANE	7.523	63	842	N.D.		
33) DIBROMOMETHANE	7.738	174	898	N.D.		
34) BROMODICLMETHANE	7.975	83	600	N.D.		
35) 2-CLETHYLVINYLETHER	8.410	63	2232	N.D.		
36) EPICHLOROHYDRIN	0.000		0	N.D.	d	
37) 4METHYL-2-PENTANONE	8.895	43	1528	N.D.		
38) CIS13DICLPROPENE	8.619	75	2982	N.D.		

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063201.D  
 Acq On : 14 Aug 2017 04:57 pm  
 Operator : NIVA  
 Sample : LRB/2712780  
 Misc : RUN190632  
 ALS Vial : 11 Sample Multiplier: 1

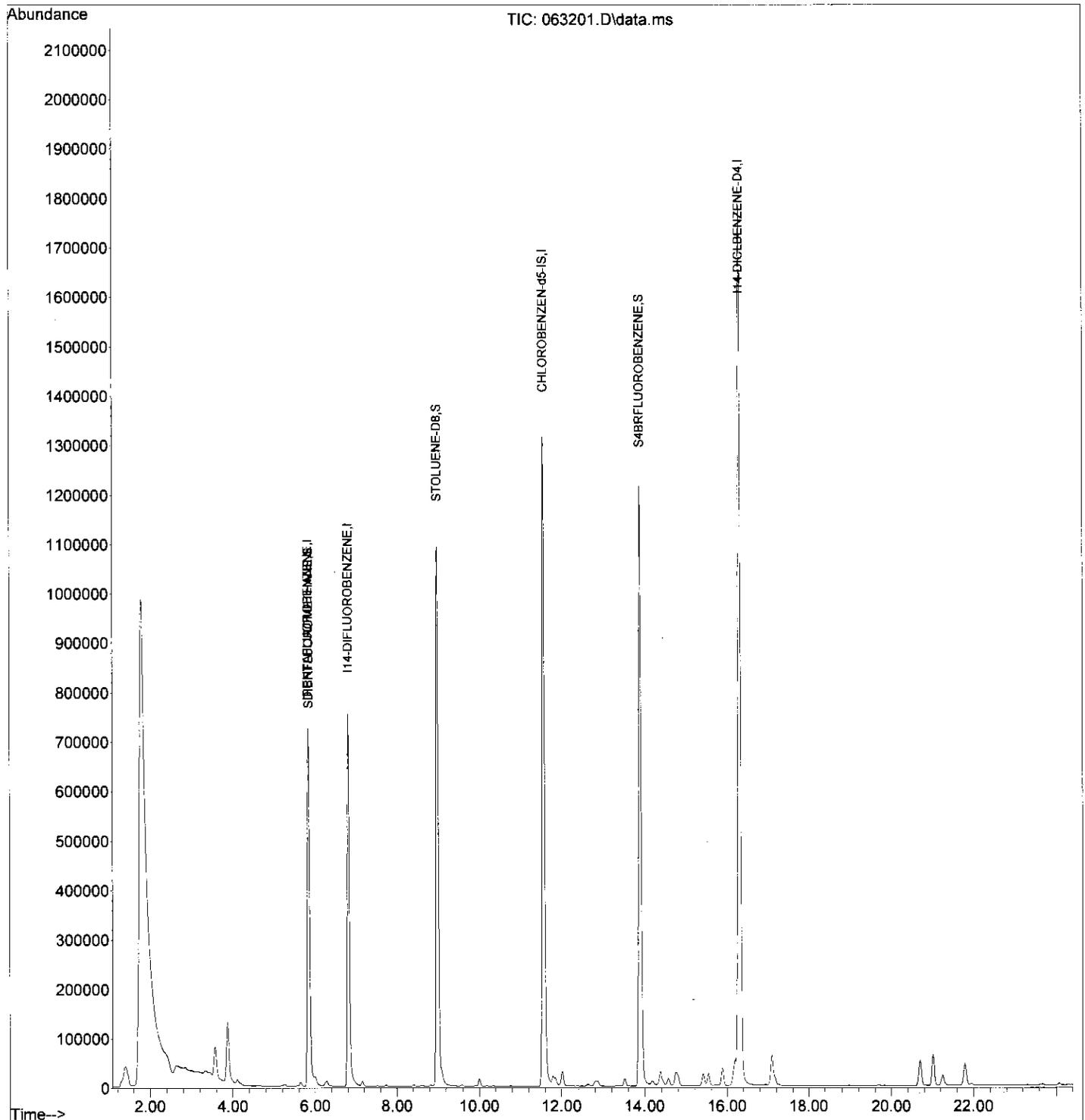
Quant Time: Aug 15 13:45:17 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.107	91	17829		N.D.	
41) TRANS13DICLPROPENE	9.542	75	94		N.D.	
42) 112-TRICHLOROETHANE	9.905	97	413		N.D.	
43) 2-HEXANONE	10.337	43	1386		N.D.	
44) 13-DICHLOROPROPANE	10.150	76	183		N.D.	
45) DIBRCHLOROMETHANE	10.591	129	520		N.D.	
46) TETRACHLOROETHENE	10.000	166	6190		N.D.	
47) 12-DIBROMOETHANE	10.769	107	1502		N.D.	
49) CHLOROBENZENE	11.662	112	498		N.D.	
50) 1-CHLOROHEXANE	11.545	91	17717		N.D.	
51) 1112-TETRACLETHANE	11.810	133	606		N.D.	
52) ETHYLBENZENE	11.790	91	25671		N.D.	
53) MP-XYLENE	11.907	91	261		N.D.	
54) STYRENE	12.864	104	12171		N.D.	
55) O-XYLENE	12.797	91	13497		N.D.	
56) BROMOFORM	13.296	173	505		N.D.	
57) 1122-TETRACLETHANE	14.336	83	1382		N.D.	
58) ISOPROPYL BENZENE	13.519	105	25869		N.D.	
60) 123-TRICLPROPANE	14.384	110	58		N.D.	
61) TRANS14DICL2BUTENE	14.428	53	3871		N.D.	
62) BROMOBENZENE	14.177	77	2549		N.D.	
63) N-PROPYLBENZENE	14.364	91	49035		N.D.	
64) 2-CHLOROTOLUENE	14.570	91	12930		N.D.	
65) 4-CHLOROTOLUENE	14.807	91	29534		N.D.	
66) 135TRIMETHYLBENZENE	14.740	105	35977		N.D.	
67) TERT-BUTYLBENZENE	15.413	119	28855		N.D.	
68) 124TRIMETHYLBENZENE	15.535	105	34682		N.D.	
69) SEC-BUTYLBENZENE	15.875	105	68539		N.D.	
70) 13-DICHLOROBENZENE	16.154	146	28188		N.D.	
72) 4-ISOPROPYLTOLUENE	0.000		0		N.D. d	
73) 14-DICHLOROBENZENE	16.358	146	31105		N.D.	
74) 12-DICHLOROBENZENE	17.175	146	19429		N.D.	
75) N-BUTYLBENZENE	0.000		0		N.D. d	
76) 12-DIBR-3CLPROPANE	18.954	157	441		N.D.	
77) 124-TRICLBENZENE	0.000		0		N.D. d	
78) NAPHTHALENE	0.000		0		N.D. d	
79) HEXACHLOROBUTADIENE	0.000		0		N.D. d	
80) 123-TRICLBENZENE	0.000		0		N.D. d	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063201.D  
 Acq On : 14 Aug 2017 04:57 pm  
 Operator : NIVA  
 Sample : LRB/2712780  
 Misc : RUN190632  
 ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 15 13:45:17 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063202.D  
 Acq On : 14 Aug 2017 05:28 pm  
 Operator : NIVA  
 Sample : MDL 0.5/2712783  
 Misc : RUN190632  
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 15 13:46:33 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.839	168	621703	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.812	114	1271123	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.561	117	1852889	20.00	µg/L	0.00
71) I14-DICLBENZENE-D4	16.305	152	1370964	20.00	µg/L	0.00
System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.853	111	364404	20.57	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	102.85%
39) STOLUENE-D8	8.996	98	1609404	20.00	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	100.00%
59) S4BRFLUOROBENZENE	13.896	95	1055543	20.09	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	100.45%
Target Compounds						
						Qvalue
2) DICLDIFLUOROMETHANE	1.943	85	21595	0.64	µg/L	97
3) CHLOROMETHANE	2.147	50	23332	0.68	µg/L	# 95
4) VINYL CHLORIDE	2.237	62	20754	0.58	µg/L	# 50
5) BROMOMETHANE	2.571	94	5724m	0.48	µg/L	
6) CHLORDETHANE	2.613	64	14537	0.84	µg/L	# 77
7) TRICLFLUOROMETHANE	2.847	101	24430	0.67	µg/L	91
8) ACROLEIN	3.329	56	58549	14.75	µg/L	# 25
9) ACETONE	3.494	43	31448	5.23	µg/L	# 78
10) 11-DICHLOROETHENE	4.118	61	21899	0.66	µg/L	98
11) IODOMETHANE	3.527	142	100146	2.38	µg/L	98
12) CARBDN DISULFIDE	3.569	76	293834	5.45	µg/L	# 85
13) ACRYLONITRILE	4.188	53	32606	2.82	µg/L	# 97
14) DICHLOROMETHANE	3.870	84	362765	11.26	µg/L	98
15) TRANS12DICLETHENE	4.116	96	17616	0.69	µg/L	99
16) 11-DICHLOROETHANE	4.595	63	25139	0.54	µg/L	# 75
17) VINYL ACETATE	4.640	43	114802	2.88	µg/L	99
18) 2-BUTANONE	5.329	43	33145	2.79	µg/L	99
19) CIS12DICHLOROETHENE	5.259	96	19865	0.59	µg/L	97
20) 22-DICHLOROPROPANE	5.209	77	17232	0.48	µg/L	# 88
21) CHLOROFORM	5.652	83	39020	0.69	µg/L	# 27
22) BROMOCHLOROMETHANE	5.555	49	13042	0.49	µg/L	# 93
25) TETRAHYDROFURAN	5.638	42	2637	0.33	µg/L	# 34
26) 111-TRICHLOROETHANE	5.814	97	21905	0.53	µg/L	# 1
27) 11-DICHLOROPROPENE	5.834	75	29922	0.81	µg/L	# 76
28) 12-DICHLOROETHANE	6.380	62	22740	0.58	µg/L	# 92
29) CARBONTETRACHLORIDE	5.990	117	19154	0.57	µg/L	# 28
30) BENZENE	6.294	78	67547	0.59	µg/L	99
31) TRICHLOROETHENE	7.158	132	20800	0.62	µg/L	93
32) 12-DICHLOROPROPANE	7.523	63	17149	0.56	µg/L	97
33) DIBROMOMETHANE	7.735	174	11999	0.50	µg/L	87
34) BROMODICLMETHANE	7.967	83	22144	0.54	µg/L	# 27
35) 2-CLETHYLVINYLETHER	8.410	63	54720	2.60	µg/L	97
36) EPICHLOROHYDRIN	8.575	57	30667	13.09	µg/L	98
37) 4METHYL-2-PENTANONE	8.893	43	72313	2.73	µg/L	# 91
38) CIS13DICLPROPENE	8.628	75	23949	0.51	µg/L	# 65

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063202.D  
 Acq On : 14 Aug 2017 05:28 pm  
 Operator : NIVA  
 Sample : MDL 0.5/2712783  
 Misc : RUN190632  
 ALS Vial : 12 Sample Multiplier: 1

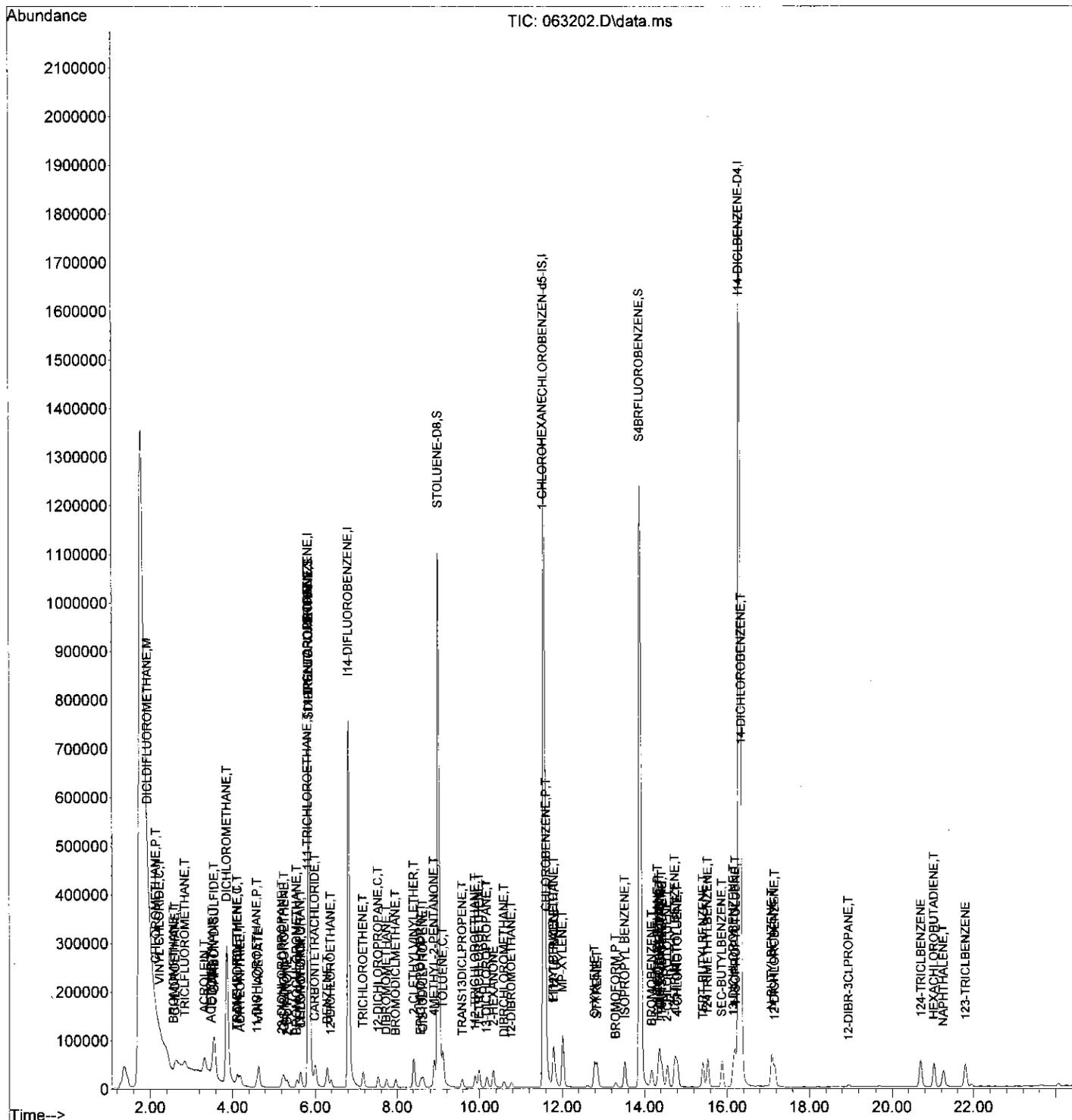
Quant Time: Aug 15 13:46:33 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.105	91	83713	0.63	µg/L	97
41) TRANS13DICLPROPENE	9.582	75	18761	0.48	µg/L #	51
42) 112-TRICHLOROETHANE	9.902	97	16991	0.55	µg/L	99
43) 2-HEXANONE	10.334	43	47701	2.58	µg/L	99
44) 13-DICHLOROPROPANE	10.173	76	28761	0.53	µg/L #	43
45) DIBRCHLOROMETHANE	10.594	129	17011	0.51	µg/L #	23
46) TETRACHLOROETHENE	10.003	166	22896	0.65	µg/L	97
47) 12-DIBROMOETHANE	10.764	107	17344	0.55	µg/L #	68
49) CHLOROBENZENE	11.614	112	53494	0.60	µg/L	77
50) 1-CHLOROHEXANE	11.548	91	29284	0.74	µg/L #	53
51) 1112-TETRACLETHANE	11.801	133	16717	0.55	µg/L #	40
52) ETHYLBENZENE	11.787	91	91923	0.63	µg/L	98
53) MP-XYLENE	12.010	91	139733	1.27	µg/L	98
54) STYRENE	12.855	104	58512	0.58	µg/L	93
55) O-XYLENE	12.797	91	70295	0.59	µg/L	99
56) BROMOFORM	13.304	173	11277	0.49	µg/L	89
57) 1122-TETRACLETHANE	14.331	83	23334	0.58	µg/L #	25
58) ISOPROPYL BENZENE	13.525	105	83077	0.60	µg/L	99
60) 123-TRICLPROPANE	14.389	110	7629	0.58	µg/L #	73
61) TRANS14DICL2BUTENE	14.431	53	22021m	2.71	µg/L	
62) BROMOBENZENE	14.177	77	35026m	0.59	µg/L	
63) N-PROPYLBENZENE	14.367	91	108258	0.65	µg/L	96
64) 2-CHLOROTOLUENE	14.559	91	59919	0.61	µg/L	85
65) 4-CHLOROTOLUENE	14.805	91	79617	0.68	µg/L	99
66) 135TRIMETHYLBENZENE	14.746	105	79588	0.64	µg/L	97
67) TERT-BUTYLBENZENE	15.410	119	63840	0.63	µg/L	97
68) 124TRIMETHYLBENZENE	15.535	105	78593	0.65	µg/L #	93
69) 5EC-BUTYLBENZENE	15.873	105	92996	0.66	µg/L	98
70) 13-DICHLOROBENZENE	16.152	146	55244	0.74	µg/L	83
72) 4-ISOPROPYLTOLUENE	16.205	119	90832	0.72	µg/L	96
73) 14-DICHLOROBENZENE	16.350	146	59250	0.78	µg/L #	80
74) 12-DICHLOROBENZENE	17.161	146	50067	0.68	µg/L	96
75) N-BUTYLBENZENE	17.091	91	90479	0.83	µg/L	96
76) 12-DIBR-3CLPROPANE	18.954	157	4430m	0.55	µg/L	
77) 124-TRICL BENZENE	20.700	180	53817	1.05	µg/L	96
78) NAPHTHALENE	21.249	128	85210	0.76	µg/L	97
79) HEXACHLOROBUTADIENE	21.015	225	28729	1.59	µg/L	97
80) 123-TRICL BENZENE	21.796	182	44777	0.99	µg/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
Data File : 063202.D  
Acq On : 14 Aug 2017 05:28 pm  
Operator : NIVA  
Sample : MDL 0.5/2712783  
Misc : RUN190632  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 15 13:46:33 2017  
Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
Quant Title : Analysis of VOC'S by 8260B,624  
QLast Update : Tue Aug 15 13:42:40 2017  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063203.D  
 Acq On : 14 Aug 2017 05:58 pm  
 Operator : NIVA  
 Sample : MDL 1.0/2712783  
 Misc : RUN190632  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 15 13:48:16 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.842	168	622705	20.00	µg/L	0.00
23) I14-DIFLUOROBENZENE	6.810	114	1292505	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.564	117	1873153	20.00	µg/L	0.00
71) I14-DICL BENZENE-D4	16.308	152	1379586	20.00	µg/L	0.00
System Monitoring Compounds						
24) 5DIBRFLUOROMETHANE	5.853	111	369774	20.53	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	102.65%	
39) 5TOLUENE-D8	8.996	98	1623804	19.85	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.25%	
59) 54BRFLUOROBENZENE	13.896	95	1058712	19.93	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.65%	
Target Compounds						
						Qvalue
2) DICL DIFLUOROMETHANE	1.935	85	37199	1.10	µg/L	94
3) CHLOROMETHANE	2.136	50	40997	1.20	µg/L #	96
4) VINYL CHLORIDE	2.239	62	36819	1.03	µg/L	91
5) BROMOMETHANE	2.521	94	21290m	1.77	µg/L	
6) CHLOROETHANE	2.627	64	19536	1.12	µg/L #	98
7) TRICL FLUOROMETHANE	2.841	101	43577	1.20	µg/L	95
8) ACROLEIN	3.324	56	95065	23.91	µg/L #	97
9) ACETONE	3.491	43	54953	9.13	µg/L #	96
10) 11-DICHLOROETHENE	4.116	61	34659	1.05	µg/L #	43
11) IODOMETHANE	3.530	142	166624	3.95	µg/L #	95
12) CARBON DISULFIDE	3.572	76	371490	6.88	µg/L #	96
13) ACRYLONITRILE	4.191	53	52765	4.56	µg/L #	98
14) DICHLOROMETHANE	3.868	84	76560m	2.37	µg/L	
15) TRANS12DICLETHENE	4.113	96	27605m	1.08	µg/L	
16) 11-DICHLOROETHANE	4.590	63	42603	0.91	µg/L #	79
17) VINYL ACETATE	4.643	43	186791	4.69	µg/L	99
18) 2-BUTANONE	5.323	43	53625	4.51	µg/L	96
19) CIS12DICHLOROETHENE	5.254	96	33806	1.01	µg/L	98
20) 22-DICHLOROPROPANE	5.212	77	31027	0.86	µg/L #	91
21) CHLOROFORM	5.652	83	62787	1.10	µg/L #	27
22) BROMOCHLOROMETHANE	5.557	49	22462	0.84	µg/L	98
25) TETRAHYDROFURAN	5.638	42	7354	0.89	µg/L #	44
26) 111-TRICHLOROETHANE	5.811	97	38869	0.93	µg/L #	1
27) 11-DICHLOROPROPENE	6.009	75	37207	0.99	µg/L	90
28) 12-DICHLOROETHANE	6.380	62	39156	0.97	µg/L #	95
29) CARBONTETRACHLORIDE	5.993	117	17526	0.51	µg/L #	36
30) BENZENE	6.294	78	114051	0.98	µg/L	99
31) TRICHLOROETHENE	7.158	132	33500	0.99	µg/L	94
32) 12-DICHLOROPROPANE	7.529	63	28537	0.91	µg/L	99
33) DIBROMOMETHANE	7.738	174	23371	0.95	µg/L	97
34) BROMODICL METHANE	7.970	83	38231	0.91	µg/L	99
35) 2-CLETHYLVINYLETHER	8.405	63	95010	4.44	µg/L	98
36) EPICHLOROHYDRIN	8.572	57	51972	21.82	µg/L	96
37) 4METHYL-2-PENTANONE	8.893	43	123565	4.58	µg/L	97
38) CIS13DICLPROPENE	8.631	75	40115	0.83	µg/L	97

## Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063203.D  
 Acq On : 14 Aug 2017 05:58 pm  
 Operator : NIVA  
 Sample : MDL 1.0/2712783  
 Misc : RUN190632  
 ALS Vial : 13 Sample Multiplier: 1

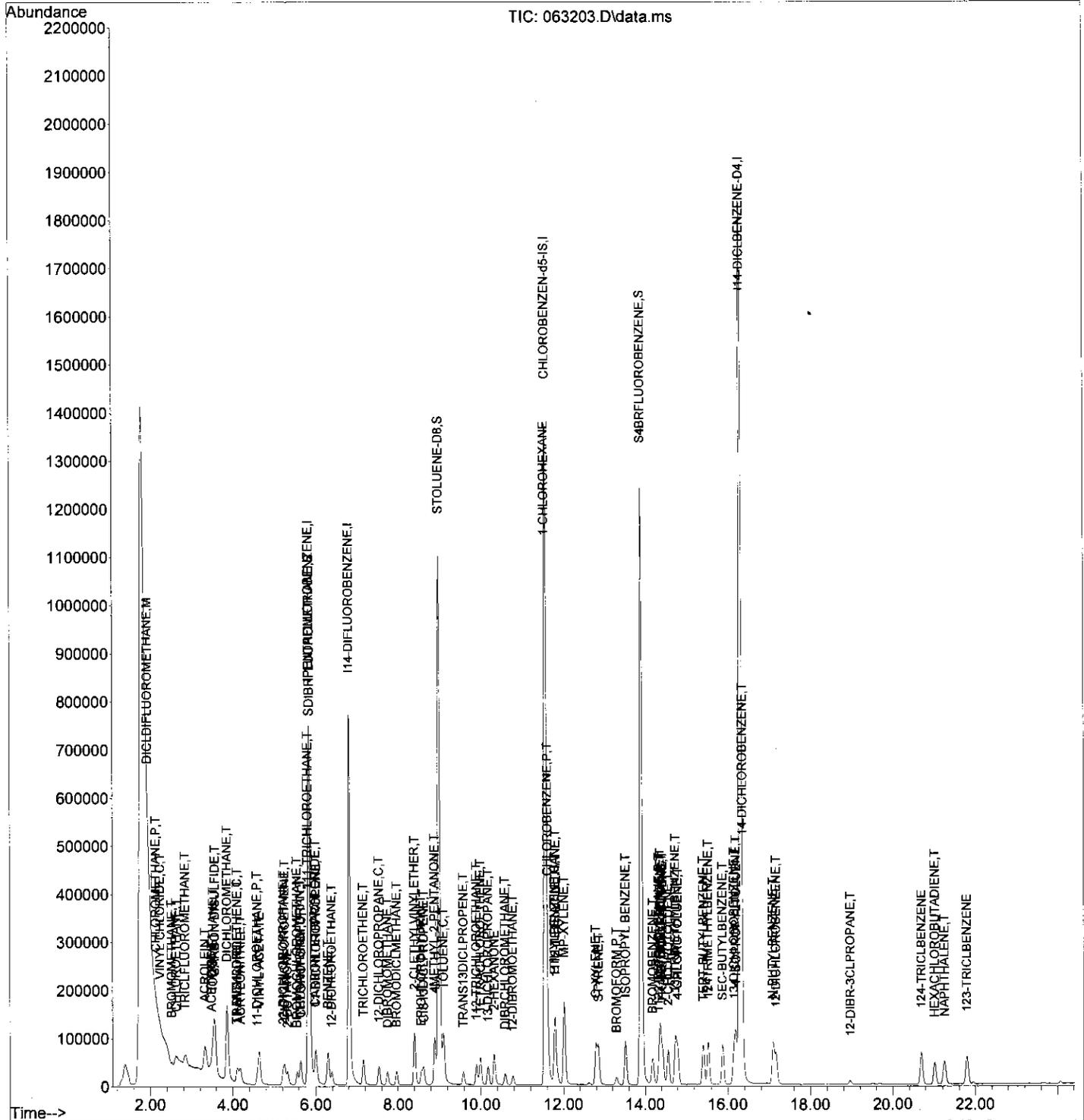
Quant Time: Aug 15 13:48:16 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.105	91	136854	1.02	µg/L	96
41) TRANS13DICLPROPENE	9.579	75	32160	0.81	µg/L	75
42) 112-TRICHLOROETHANE	9.899	97	29553	0.94	µg/L	99
43) 2-HEXANONE	10.332	43	83241	4.43	µg/L	99
44) 13-DICHLOROPROPANE	10.181	76	51565	0.94	µg/L	96
45) DIBRCHLOROMETHANE	10.585	129	29161	0.86	µg/L	94
46) TETRACHLOROETHENE	10.000	166	37384	1.05	µg/L	98
47) 12-DIBROMOETHANE	10.764	107	29440	0.93	µg/L #	7
49) CHLOROBENZENE	11.612	112	86878	0.96	µg/L	85
50) 1-CHLOROHEXANE	11.545	91	43629	1.08	µg/L #	68
51) 1112-TETRACLETHANE	11.801	133	27848	0.91	µg/L	94
52) ETHYLBENZENE	11.787	91	151982	1.03	µg/L	100
53) MP-XYLENE	12.013	91	233313	2.09	µg/L	99
54) STYRENE	12.861	104	97463	0.96	µg/L	92
55) O-XYLENE	12.797	91	118077	0.99	µg/L #	92
56) BROMOFORM	13.304	173	19575	0.84	µg/L	97
57) 1122-TETRACLETHANE	14.328	83	38506	0.94	µg/L	97
58) ISOPROPYL BENZENE	13.525	105	138722	0.99	µg/L	99
60) 123-TRICLPROPANE	14.386	110	12604	0.95	µg/L #	80
61) TRANS14DICL2BUTENE	14.423	53	35178	4.29	µg/L #	76
62) BROMOBENZENE	14.180	77	59086	0.98	µg/L	98
63) N-PROPYLBENZENE	14.364	91	175302	1.03	µg/L	97
64) 2-CHLOROTOLUENE	14.568	91	100946	1.02	µg/L	80
65) 4-CHLOROTOLUENE	14.799	91	121619	1.03	µg/L	98
66) 135TRIMETHYLBENZENE	14.743	105	127326	1.02	µg/L	97
67) TERT-BUTYLBENZENE	15.415	119	102654	1.01	µg/L	97
68) 124TRIMETHYLBENZENE	15.533	105	127362	1.04	µg/L	99
69) SEC-BUTYLBENZENE	15.873	105	141788	1.00	µg/L	98
70) 13-DICHLOROBENZENE	16.154	146	81153	1.08	µg/L	99
72) 4-ISOPROPYLTOLUENE	16.202	119	130181	1.03	µg/L	99
73) 14-DICHLOROBENZENE	16.358	146	86243	1.13	µg/L #	32
74) 12-DICHLOROBENZENE	17.164	146	76295	1.03	µg/L	99
75) N-BUTYLBENZENE	17.086	91	119005	1.08	µg/L	94
76) 12-DIBR-3CLPROPANE	18.968	157	7057m	0.87	µg/L	
77) 124-TRICL BENZENE	20.694	180	64309	1.25	µg/L	97
78) NAPHTHALENE	21.252	128	120096	1.07	µg/L	96
79) HEXACHLOROBUTADIENE	21.018	225	27580	1.52	µg/L	96
80) 123-TRICL BENZENE	21.790	182	55188	1.21	µg/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063203.D  
 Acq On : 14 Aug 2017 05:58 pm  
 Operator : NIVA  
 Sample : MDL 1.0/2712783  
 Misc : RUN190632  
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 15 13:48:16 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063204.D  
 Acq On : 14 Aug 2017 06:27 pm  
 Operator : NIVA  
 Sample : ICV/2712781  
 Misc : RUN190632  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 15 13:42:43 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I IPENTAFLUOROBENZENE	1.000	1.000	0.0	98	0.00
2 M DICLDIFLUOROMETHANE	1.085	1.208	-11.3	0#	-0.01
3 P,T CHLOROMETHANE	1.097	1.149	-4.7	0#	0.00
4 C,T VINYL CHLORIDE	1.152	1.266	-9.9	0#	0.00
5 T BROMOMETHANE	0.386	0.387	-0.3	96	-0.01
6 T CHLOROETHANE	0.559	0.535	4.3	104	-0.02
7 T TRICLFLUOROMETHANE	1.169	1.323	-13.2	151#	-0.02
8 T ACROLEIN	0.128	0.124	3.1	89	-0.01
9 T ACETONE	0.193	0.184	4.7	91	0.00
10 C,T 11-DICHLOROETHENE	1.063	1.080	-1.6	107	0.00
11 T IODOMETHANE	1.354	1.398	-3.2	98	0.00
12 T CARBON DISULFIDE	1.733	1.773	-2.3	95	0.00
13 T ACRYLONITRILE	0.372	0.376	-1.1	97	0.00
14 T DICHLOROMETHANE	1.036	1.097	-5.9	104	0.00
15 T TRANS12DICLETHENE	0.825	0.830	-0.6	99	0.00
16 P,T 11-DICHLOROETHANE	1.501	1.538	-2.5	99	0.00
17 VINYL ACETATE	1.280	1.259	1.6	91	0.00
18 2-BUTANONE	0.382	0.389	-1.8	96	0.00
19 T CIS12DICHLOROETHENE	1.080	1.115	-3.2	100	0.00
20 T 22-DICHLOROPROPANE	1.161	1.077	7.2	90	0.00
21 C,T CHLOROFORM	1.826	1.822	0.2	101	0.00
22 T BROMOCHLOROMETHANE	0.860	0.877	-2.0	98	0.00
23 I I14-DIFLUOROBENZENE	1.000	1.000	0.0	99	0.00
24 S SDIBRFLUOROMETHANE	0.279	0.278	0.4	98	0.00
25 T TETRAHYDROFURAN	0.127	0.124	2.4	95	0.00
26 T 111-TRICHLOROETHANE	0.646	0.680	-5.3	102	0.00
27 T 11-DICHLOROPROPENE	0.581	0.605	-4.1	101	0.00
28 T 12-DICHLOROETHANE	0.622	0.626	-0.6	99	0.00
29 T CARBONTETRACHLORIDE	0.529	0.554	-4.7	100	0.00
30 T BENZENE	1.804	1.864	-3.3	100	0.00
31 T TRICHLOROETHENE	0.524	0.551	-5.2	103	0.00
32 C,T 12-DICHLOROPROPANE	0.483	0.487	-0.8	99	0.00
33 T DIBROMOMETHANE	0.379	0.381	-0.5	99	0.00
34 T BROMODICLMETHANE	0.650	0.657	-1.1	100	0.00
35 T 2-CLETHYLVINYLETHER	0.331	0.345	-4.2	98	0.00
36 T EPICHLOROHYDRIN	0.037	0.036#	2.7	95	0.00
37 T 4METHYL-2-PENTANONE	0.417	0.432	-3.6	97	0.00
38 T CIS13DICLPROPENE	0.746	0.752	-0.8	98	0.00
39 S 5TOLUENE-D8	1.266	1.273	-0.6	99	0.00
40 C,T TOLUENE	2.074	2.175	-4.9	101	0.00
41 T TRANS13DICLPROPENE	0.616	0.616	0.0	99	0.00
42 T 112-TRICHLOROETHANE	0.485	0.488	-0.6	100	0.00
43 2-HEXANONE	0.291	0.302	-3.8	97	0.00
44 T 13-DICHLOROPROPANE	0.849	0.861	-1.4	100	0.00
45 T DIBRCHLOROMETHANE	0.527	0.532	-0.9	100	0.00

Evaluate Continuing Calibration Report

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063204.D  
 Acq On : 14 Aug 2017 06:27 pm  
 Operator : NIVA  
 Sample : ICV/2712781  
 Misc : RUN190632  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 15 13:42:43 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 Qlast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Min. RRF : 0.100 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
 Max. RRF Dev : 20% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
46 T TETRACHLOROETHENE	0.552	0.581	-5.3	102	0.00
47 T 12-DIBROMOETHANE	0.492	0.500	-1.6	100	0.00
48 I CHLOROBENZEN-d5-IS	1.000	1.000	0.0	100	0.00
49 P,T CHLOROBENZENE	0.970	0.970	0.0	101	0.00
50 1-CHLOROHEXANE	0.429	0.437	-1.9	102	0.00
51 T 1112-TETRACLETHANE	0.328	0.331	-0.9	102	0.00
52 C,T ETHYLBENZENE	1.575	1.640	-4.1	101	0.00
53 T MP-XYLENE	1.191	1.251	-5.0	101	0.00
54 T STYRENE	1.081	1.112	-2.9	101	0.00
55 T O-XYLENE	1.275	1.313	-3.0	101	0.00
56 P,T BROMOFORM	0.249	0.240	3.6	98	0.00
57 P,T 1122-TETRACLETHANE	0.437	0.431	1.4	98	0.00
58 T ISOPROPYL BENZENE	1.503	1.590	-5.8	101	0.00
59 S 54BRFLUOROBENZENE	0.567	0.569	-0.4	101	0.00
60 T 123-TRICLPROPANE	0.141	0.140	0.7	99	0.00
61 T TRANS14DICL2BUTENE	0.088	0.084#	4.5	92	0.00
62 T BROMOBENZENE	0.644	0.645	-0.2	100	0.00
63 T N-PROPYLBENZENE	1.811	1.888	-4.3	100	0.00
64 T 2-CHLOROTOLUENE	1.057	1.067	-0.9	101	0.00
65 T 4-CHLOROTOLUENE	1.260	1.271	-0.9	100	0.00
66 T 135TRIMETHYLBENZENE	1.333	1.385	-3.9	101	0.00
67 T TERT-BUTYLBENZENE	1.089	1.132	-3.9	101	0.00
68 T 124TRIMETHYLBENZENE	1.303	1.329	-2.0	101	0.00
69 T SEC-BUTYLBENZENE	1.510	1.576	-4.4	101	0.00
70 T 13-DICHLOROBENZENE	0.803	0.801	0.2	101	0.00
71 I I14-DICLBNZENE-D4	1.000	1.000	0.0	101	0.00
72 T 4-ISOPROPYLTOLUENE	1.833	1.902	-3.8	100	0.00
73 T 14-DICHLOROBENZENE	1.107	1.093	1.3	101	0.00
74 T 12-DICHLOROBENZENE	1.070	1.069	0.1	101	0.00
75 T N-BUTYLBENZENE	1.599	1.630	-1.9	99	0.00
76 T 12-DIBR-3CLPROPANE	0.118	0.120	-1.7	99	0.00
77 124-TRICLBNZENE	0.749	0.750	-0.1	100	0.00
78 T NAPHTHALENE	1.632	1.680	-2.9	99	0.01
79 T HEXACHLOROBUTADIENE	0.263	0.263	0.0	99	0.00
80 123-TRICLBNZENE	0.660	0.660	0.0	100	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063204.D  
 Acq On : 14 Aug 2017 06:27 pm  
 Operator : NIVA  
 Sample : ICV/2712781  
 Misc : RUN190632  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 15 13:42:43 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.839	168	607190	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.809	114	1267874	20.00	µg/L	0.00
48) CHLOROBENZENE-d5-IS	11.567	117	1873709	20.00	µg/L	0.00
71) I14-DICL BENZENE-D4	16.308	152	1382426	20.00	µg/L	0.00
System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.853	111	352384	19.95	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.75%	
39) STOLUENE-D8	8.996	98	1614620	20.12	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	100.60%	
59) S4BRFLUOROBENZENE	13.898	95	1065714	20.06	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	100.30%	
Target Compounds						
						Qvalue
2) DICL DIFLUOROMETHANE	1.935	85	733426	22.26	µg/L	99
3) CHLOROMETHANE	2.138	50	697760	20.95	µg/L	99
4) VINYL CHLORIDE	2.239	62	768688	21.98	µg/L	98
5) BROMOMETHANE	2.520	94	235093	20.06	µg/L	96
6) CHLOROETHANE	2.615	64	324959	19.15	µg/L	98
7) TRICL FLUOROMETHANE	2.836	101	803322m	22.64	µg/L	
8) ACROLEIN	3.312	56	1883020	485.62	µg/L	100
9) ACETONE	3.483	43	559717	95.35	µg/L	98
10) 11-DICHLOROETHENE	4.116	61	655646	20.32	µg/L	96
11) IODOMETHANE	3.522	142	4244345	103.29	µg/L	100
12) CARBON DISULFIDE	3.566	76	5381947	102.27	µg/L	98
13) ACRYLONITRILE	4.183	53	1141175	101.16	µg/L	99
14) DICHLOROMETHANE	3.870	84	666306	21.18	µg/L	98
15) TRANS12DICLETHENE	4.113	96	503907	20.13	µg/L	95
16) 11-DICHLOROETHANE	4.587	63	933640	20.49	µg/L	99
17) VINYL ACETATE	4.634	43	3821400	98.32	µg/L	99
18) 2-BUTANONE	5.315	43	1180458	101.91	µg/L	96
19) CIS12DICHLOROETHENE	5.253	96	677044	20.65	µg/L	96
20) 22-DICHLOROPROPANE	5.214	77	653753	18.55	µg/L	95
21) CHLOROFORM	5.644	83	1106109	19.96	µg/L	99
22) BROMOCHLOROMETHANE	5.560	49	532642	20.40	µg/L	94
25) TETRAHYDROFURAN	5.624	42	157052	19.47	µg/L	94
26) 111-TRICHLOROETHANE	5.806	97	862434	21.07	µg/L	# 84
27) 11-DICHLOROPROPENE	6.006	75	767623	20.83	µg/L	98
28) 12-DICHLOROETHANE	6.383	62	793333	20.11	µg/L	100
29) CARBONTETRACHLORIDE	5.990	117	702345	20.93	µg/L	98
30) BENZENE	6.291	78	2363062	20.66	µg/L	98
31) TRICHLOROETHENE	7.155	132	698343	21.02	µg/L	98
32) 12-DICHLOROPROPANE	7.521	63	617000	20.14	µg/L	99
33) DIBROMOMETHANE	7.735	174	482661	20.07	µg/L	98
34) BROMODICL METHANE	7.967	83	832513	20.20	µg/L	100
35) 2-CLETHYL VINYLETHER	8.407	63	2188539	104.15	µg/L	95
36) EPICHLOROHYDRIN	8.572	57	1154922	494.30	µg/L	99
37) 4METHYL-2-PENTANONE	8.887	43	2739467	103.59	µg/L	99
38) CIS13DICLPROPENE	8.630	75	953599	20.16	µg/L	96

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063204.D  
 Acq On : 14 Aug 2017 06:27 pm  
 Operator : NIVA  
 Sample : ICV/2712781  
 Misc : RUN190632  
 ALS Vial : 14 Sample Multiplier: 1

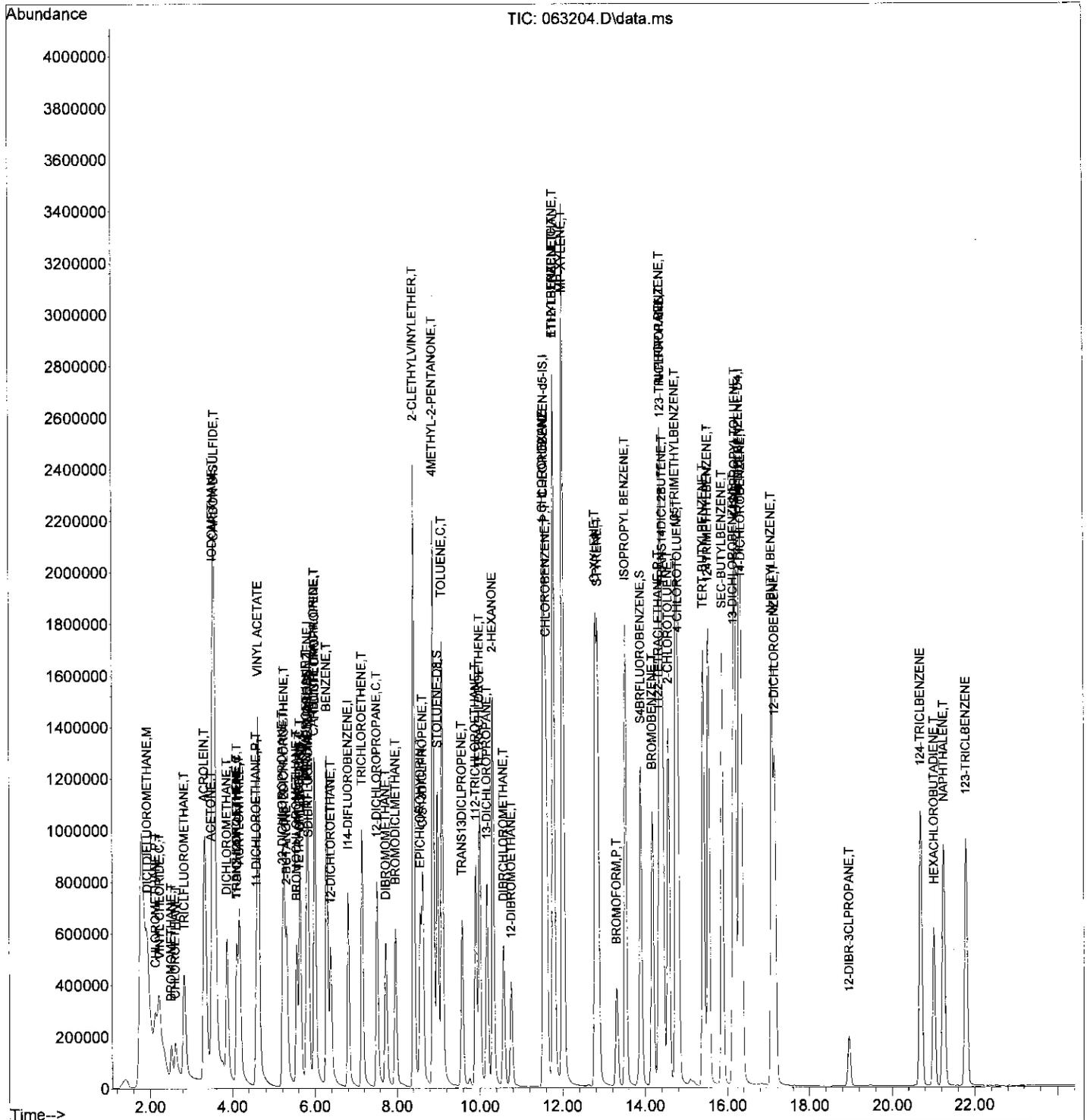
Quant Time: Aug 15 13:42:43 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.105	91	2757534	20.97	µg/L	99
41) TRANS13DICLPROPENE	9.579	75	781250	20.02	µg/L	98
42) 112-TRICHLOROETHANE	9.899	97	618801	20.12	µg/L	99
43) 2-HEXANONE	10.320	43	1915042	103.96	µg/L	98
44) 13-DICHLOROPROPANE	10.181	76	1091716	20.30	µg/L	96
45) DIBRCHLOROMETHANE	10.585	129	673927	20.17	µg/L	98
46) TETRACHLOROETHENE	10.000	166	736585	21.04	µg/L	99
47) 12-DIBROMOETHANE	10.769	107	634525	20.34	µg/L	100
49) CHLOROBENZENE	11.617	112	1818059	20.00	µg/L	97
50) 1-CHLOROHEXANE	11.545	91	818326	20.34	µg/L	97
51) 1112-TETRACLETHANE	11.798	133	619886	20.15	µg/L	98
52) ETHYLBENZENE	11.790	91	3072650	20.83	µg/L	99
53) MP-XYLENE	12.016	91	4687799	42.02	µg/L	99
54) STYRENE	12.855	104	2083557	20.57	µg/L	89
55) O-XYLENE	12.797	91	2459503	20.59	µg/L	92
56) BROMOFORM	13.304	173	449198	19.25	µg/L	98
57) 1122-TETRACLETHANE	14.333	83	807217	19.73	µg/L	99
58) ISOPROPYL BENZENE	13.525	105	2979739	21.16	µg/L	100
60) 123-TRICLPROPANE	14.386	110	262619	19.86	µg/L	95
61) TRANS14DICL2BUTENE	14.431	53	785237	95.64	µg/L	97
62) BROMOBENZENE	14.177	77	1208637	20.02	µg/L	97
63) N-PROPYLBENZENE	14.372	91	3536975	20.84	µg/L	99
64) 2-CHLOROTOLUENE	14.565	91	1998394	20.17	µg/L	98
65) 4-CHLOROTOLUENE	14.805	91	2382235	20.18	µg/L	99
66) 135TRIMETHYLBENZENE	14.746	105	2594228	20.77	µg/L	98
67) TERT-BUTYLBENZENE	15.415	119	2121153	20.79	µg/L	98
68) 124TRIMETHYLBENZENE	15.532	105	2490929	20.40	µg/L	99
69) SEC-BUTYLBENZENE	15.878	105	2953587	20.88	µg/L	99
70) 13-DICHLOROBENZENE	16.157	146	1501645	19.95	µg/L	99
72) 4-ISOPROPYLTOLUENE	16.204	119	2629335	20.75	µg/L	100
73) 14-DICHLOROBENZENE	16.355	146	1510731	19.75	µg/L	97
74) 12-DICHLOROBENZENE	17.164	146	1477441	19.98	µg/L	100
75) N-BUTYLBENZENE	17.094	91	2253037	20.39	µg/L	98
76) 12-DIBR-3CLPROPANE	18.962	157	166321	20.35	µg/L	98
77) 124-TRICL BENZENE	20.691	180	1036786	20.03	µg/L	99
78) NAPHTHALENE	21.255	128	2322437	20.59	µg/L	99
79) HEXACHLOROBUTADIENE	21.021	225	363597	20.01	µg/L	98
80) 123-TRICL BENZENE	21.796	182	912447	20.01	µg/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063204.D  
 Acq On : 14 Aug 2017 06:27 pm  
 Operator : NIVA  
 Sample : ICV/2712781  
 Misc : RUN190632  
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 15 13:42:43 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063210.D  
 Acq On : 14 Aug 2017 09:23 pm  
 Operator : NIVA  
 Sample : 2710179  
 Misc : RUN190632  
 ALS Vial : 20 Sample Multiplier: 1

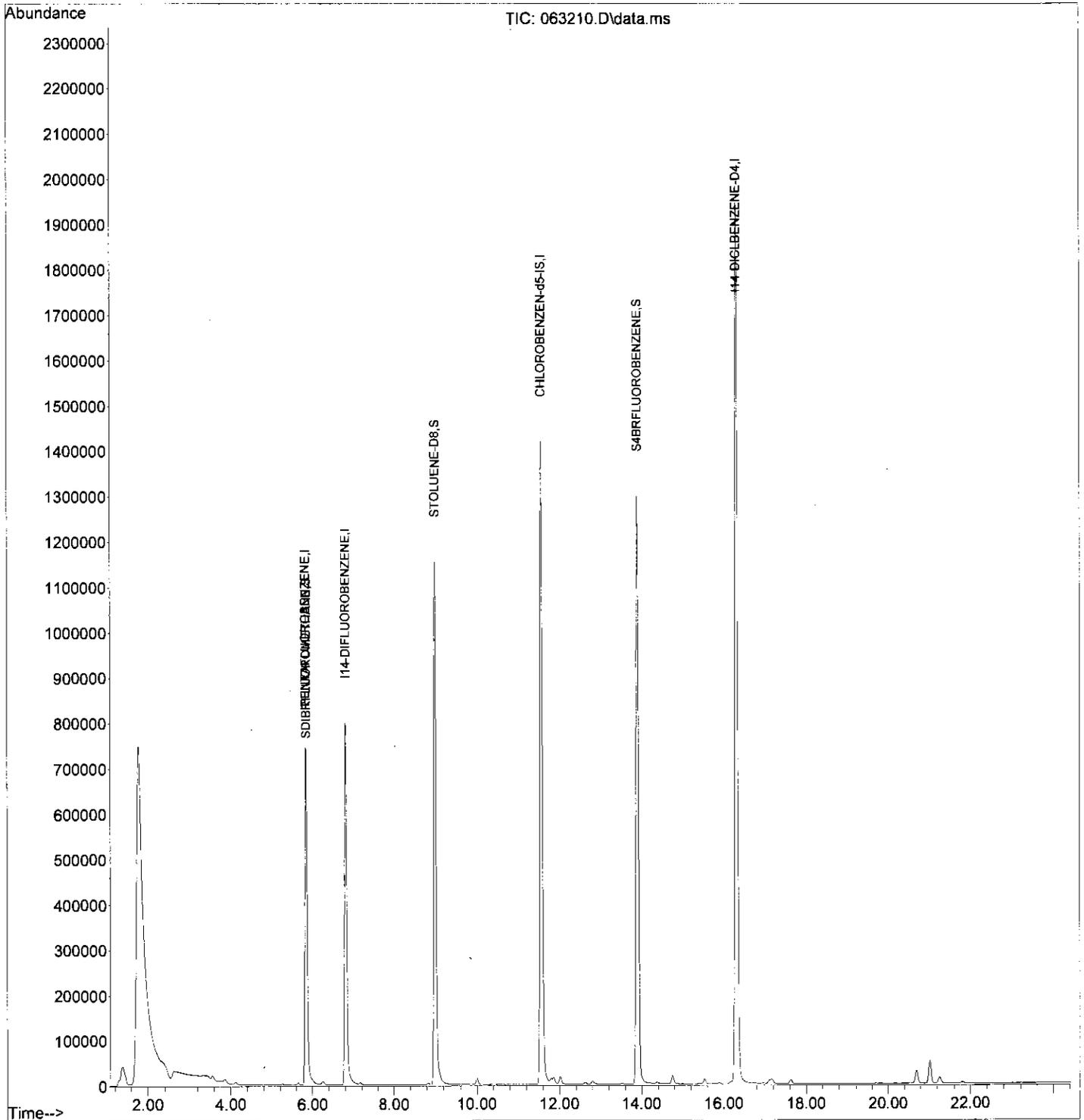
Quant Time: Aug 15 13:51:05 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.099	91	5211			N.D.
41) TRANS13DICLPROPENE	9.581	75	157			N.D.
42) 112-TRICHLOROETHANE	9.891	97	54			N.D.
43) 2-HEXANONE	10.323	43	37			N.D.
44) 13-DICHLOROPROPANE	0.000		0			N.D.
45) DIBRCHLOROMETHANE	10.588	129	146			N.D.
46) TETRACHLOROETHENE	9.997	166	6641			N.D.
47) 12-DIBROMOETHANE	10.766	107	315			N.D.
49) CHLOROBENZENE	11.639	112	249			N.D.
50) 1-CHLOROHEXANE	11.533	91	1512			N.D.
51) 1112-TETRACLETHANE	11.798	133	140			N.D.
52) ETHYLBENZENE	11.793	91	13846			N.D.
53) MP-XYLENE	0.000		0			N.D. d
54) STYRENE	12.858	104	1402			N.D.
55) O-XYLENE	12.791	91	11404			N.D.
56) BROMOFORM	13.304	173	26			N.D.
57) 1122-TETRACLETHANE	14.322	83	54			N.D.
58) ISOPROPYL BENZENE	13.516	105	514			N.D.
60) 123-TRICLPROPANE	14.389	110	56			N.D.
61) TRANS14DICL2BUTENE	14.431	53	61			N.D.
62) BROMOBENZENE	14.174	77	185			N.D.
63) N-PROPYLBENZENE	14.367	91	6923			N.D.
64) 2-CHLOROTOLUENE	14.565	91	1163			N.D.
65) 4-CHLOROTOLUENE	14.791	91	1380			N.D.
66) 135TRIMETHYLBENZENE	14.746	105	26134			N.D.
67) TERT-BUTYLBENZENE	15.404	119	911			N.D.
68) 124TRIMETHYLBENZENE	15.530	105	17911			N.D.
69) SEC-BUTYLBENZENE	15.881	105	2606			N.D.
70) 13-DICHLOROBENZENE	16.151	146	2111			N.D.
72) 4-ISOPROPYLTOLUENE	16.202	119	6236			N.D.
73) 14-DICHLOROBENZENE	16.358	146	2952			N.D.
74) 12-DICHLOROBENZENE	17.169	146	12932			N.D.
75) N-BUTYLBENZENE	17.086	91	4704			N.D.
76) 12-DIBR-3CLPROPANE	18.968	157	62			N.D.
77) 124-TRICL BENZENE	0.000		0			N.D. d
78) NAPHTHALENE	21.246	128	21718			N.D.
79) HEXACHLOROBUTADIENE	0.000		0			N.D. d
80) 123-TRICL BENZENE	21.785	182	1511			N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063210.D  
 Acq On : 14 Aug 2017 09:23 pm  
 Operator : NIVA  
 Sample : 2710179  
 Misc : RUN190632  
 ALS Vial : 20 Sample Multiplier: 1

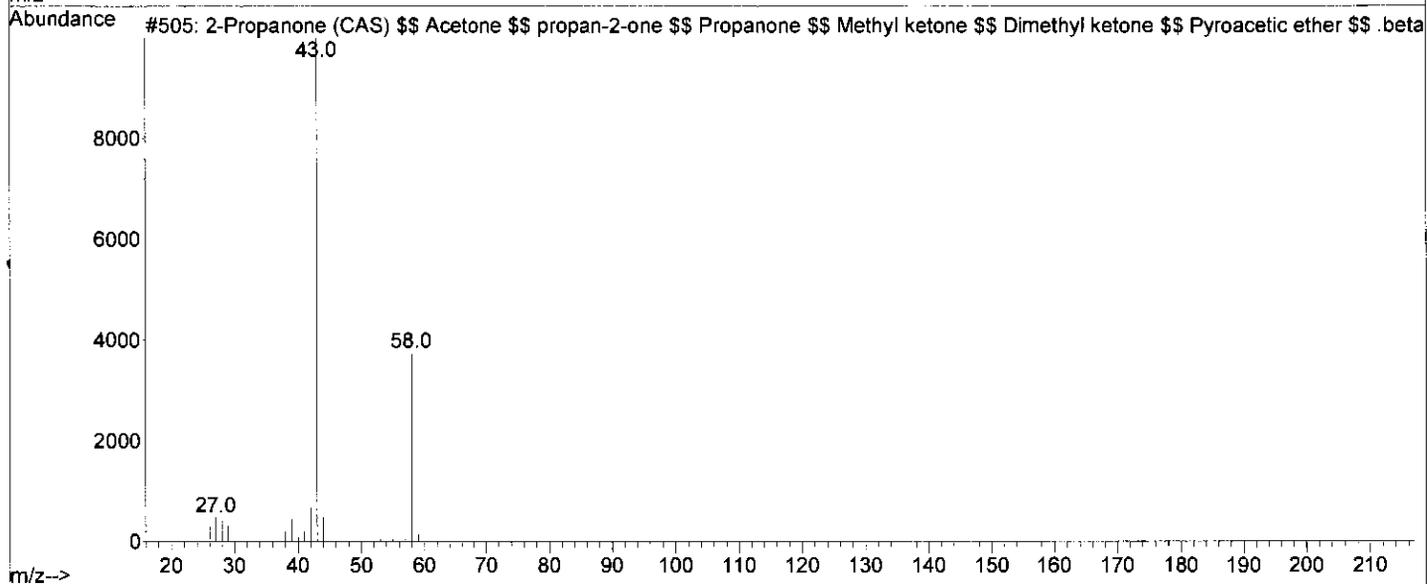
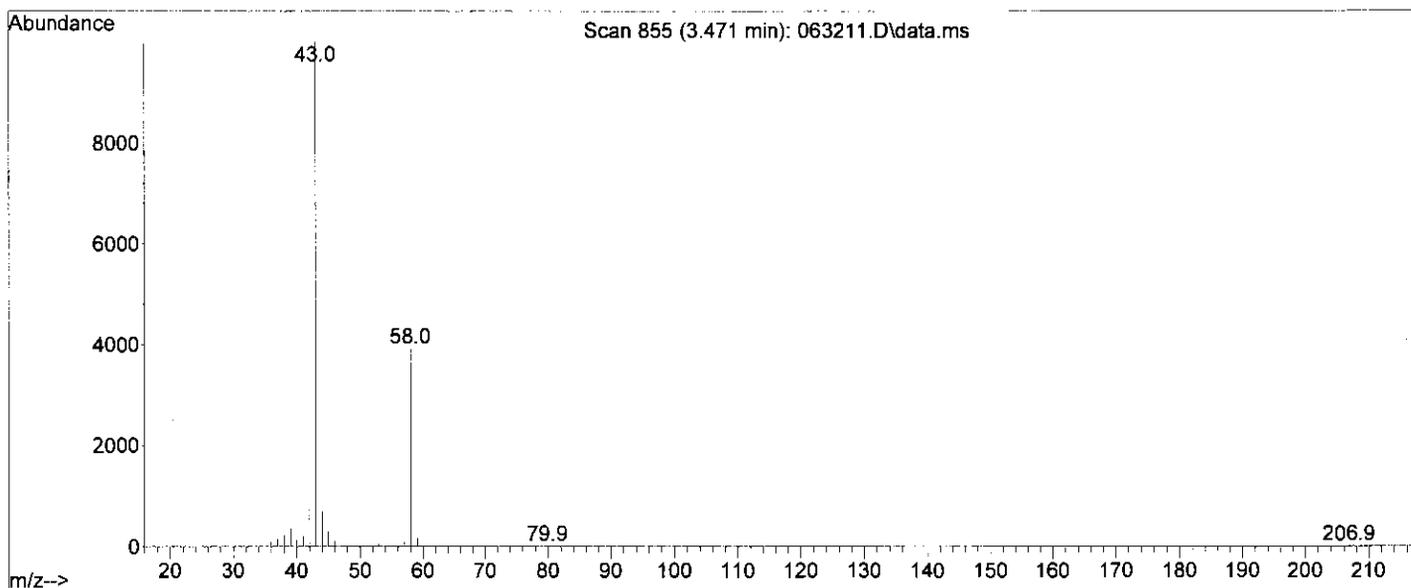
Quant Time: Aug 15 13:51:05 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



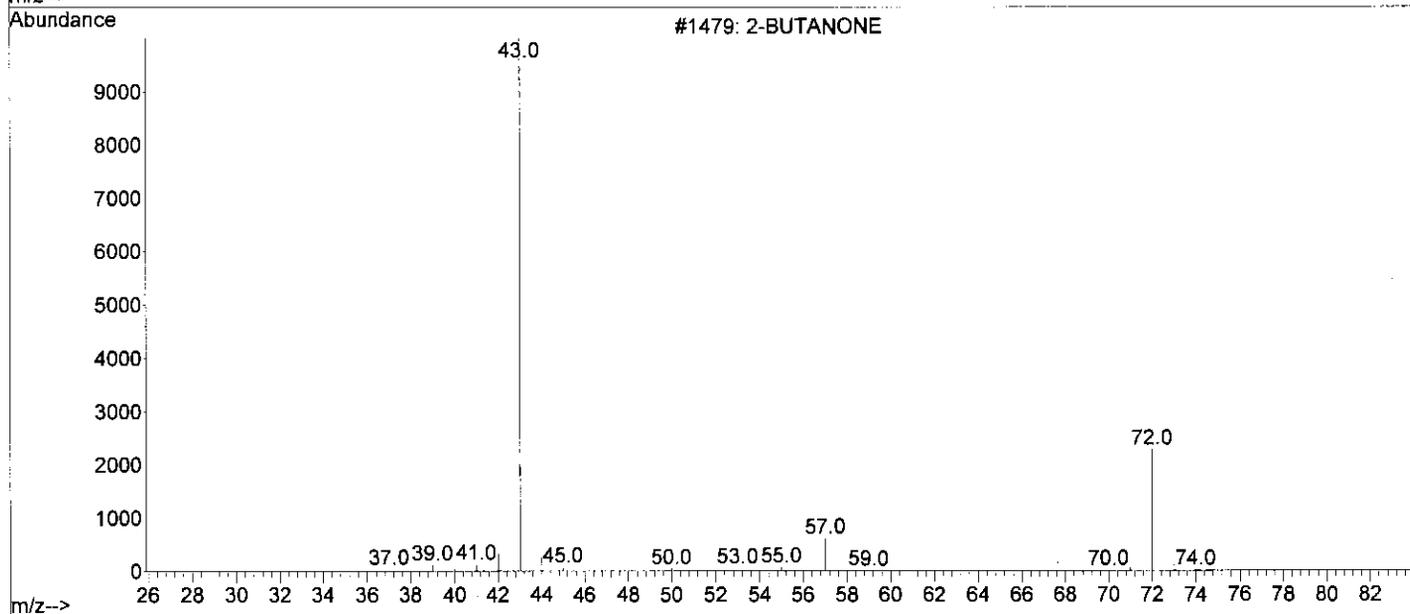
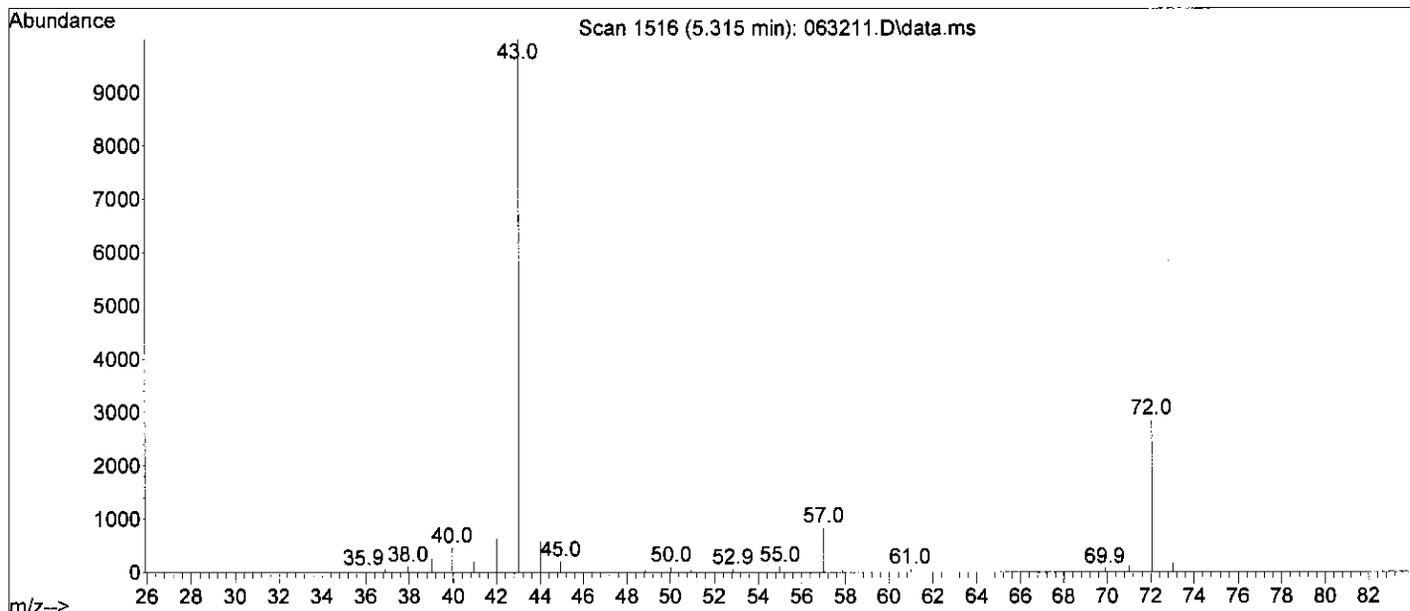
Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 80

ID : 2-Propanone (CAS) \$\$ Acetone \$\$ propan-2-one \$\$ Propanone \$\$ Methyl ketone \$\$ Dimethyl ketone \$\$ Pyroacetic ether \$\$ .beta.-Ketopropane \$\$ Dimethylformaldehyde \$\$ ACETONE (2-PROPANONE) \$\$ (CH3)2CO \$\$ Allylic alcohol \$\$ Dimethylketal \$\$ Ketone propane \$\$ K



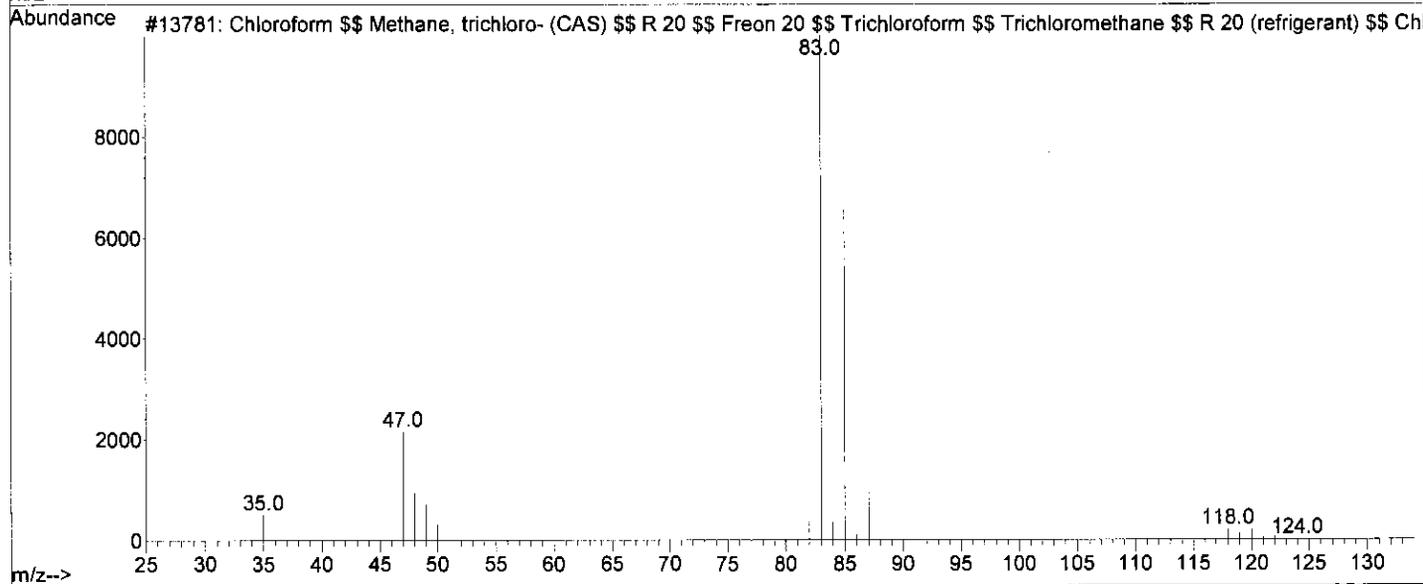
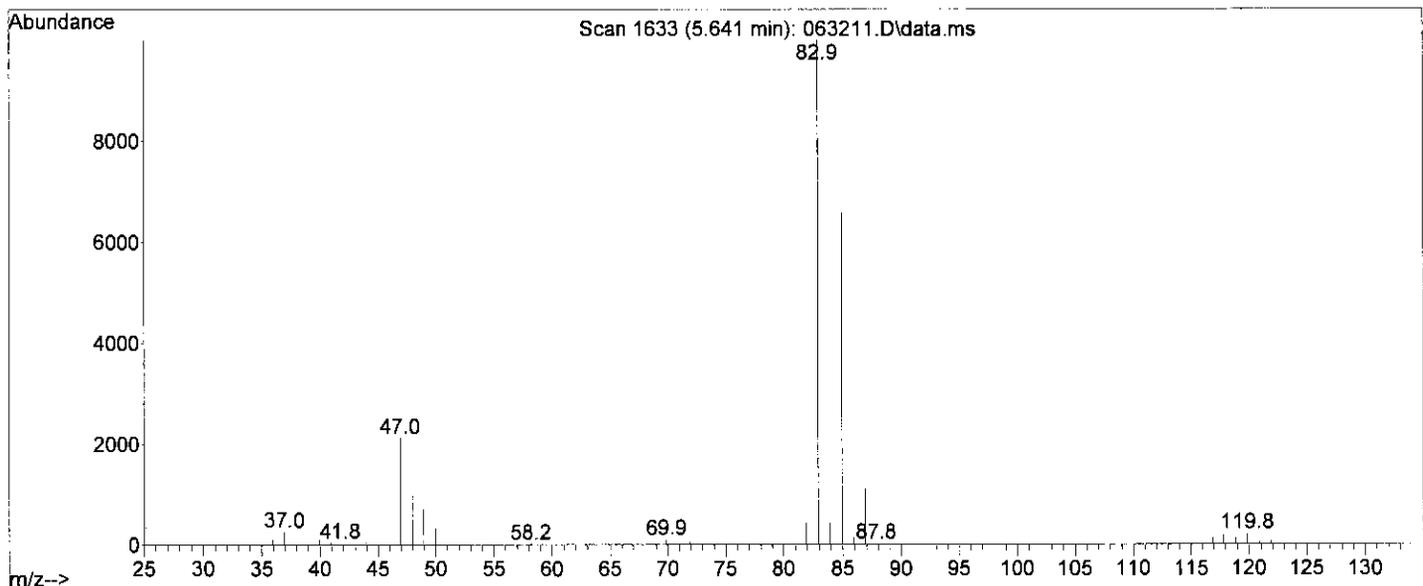
Library Searched : D:\MassHunter\Library\WILEY275.L  
Quality : 86  
ID : 2-BUTANONE



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 97

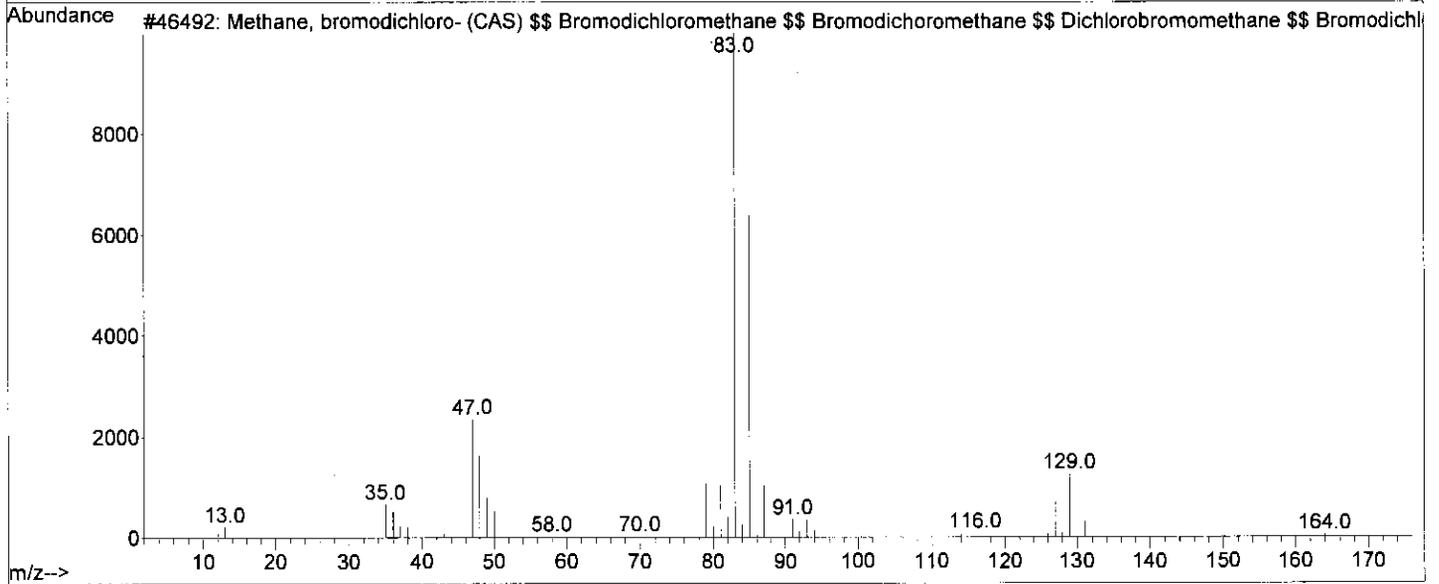
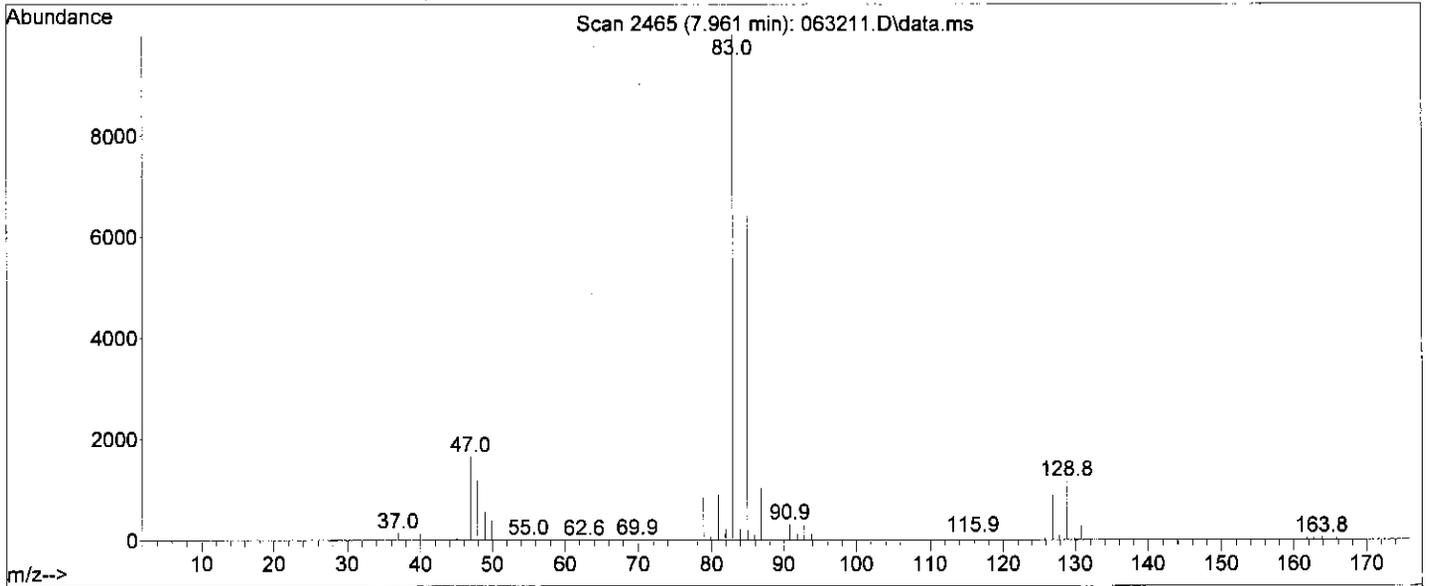
ID : Chloroform \$\$ Methane, trichloro- (CAS) \$\$ R 20 \$\$ Freon 20 \$\$ Trichloroform \$\$ Trichloromethane \$\$ R 20 (refrigerant) \$\$ Chloroform (ACN)(DOT) \$\$ TRICHLOROMETHANE (CHLOROFORM) \$\$ CHCl3 \$\$ Formyl trichloride \$\$ Methane trichloride \$\$ Methenyl trichloride



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 96

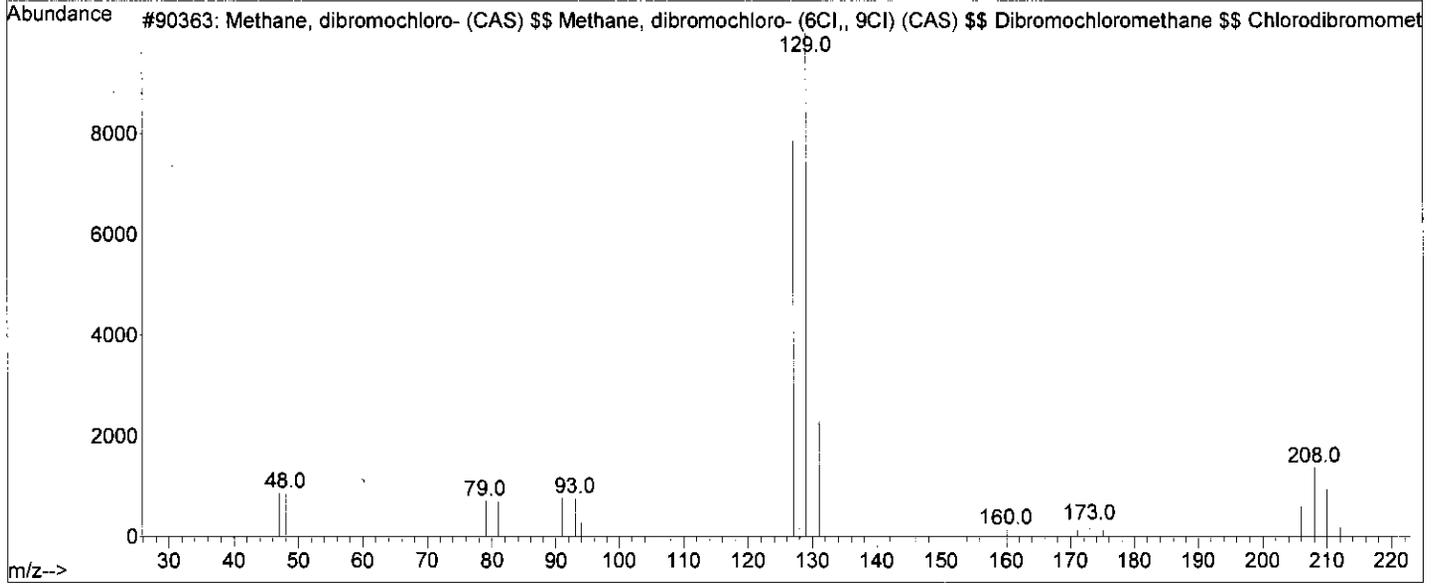
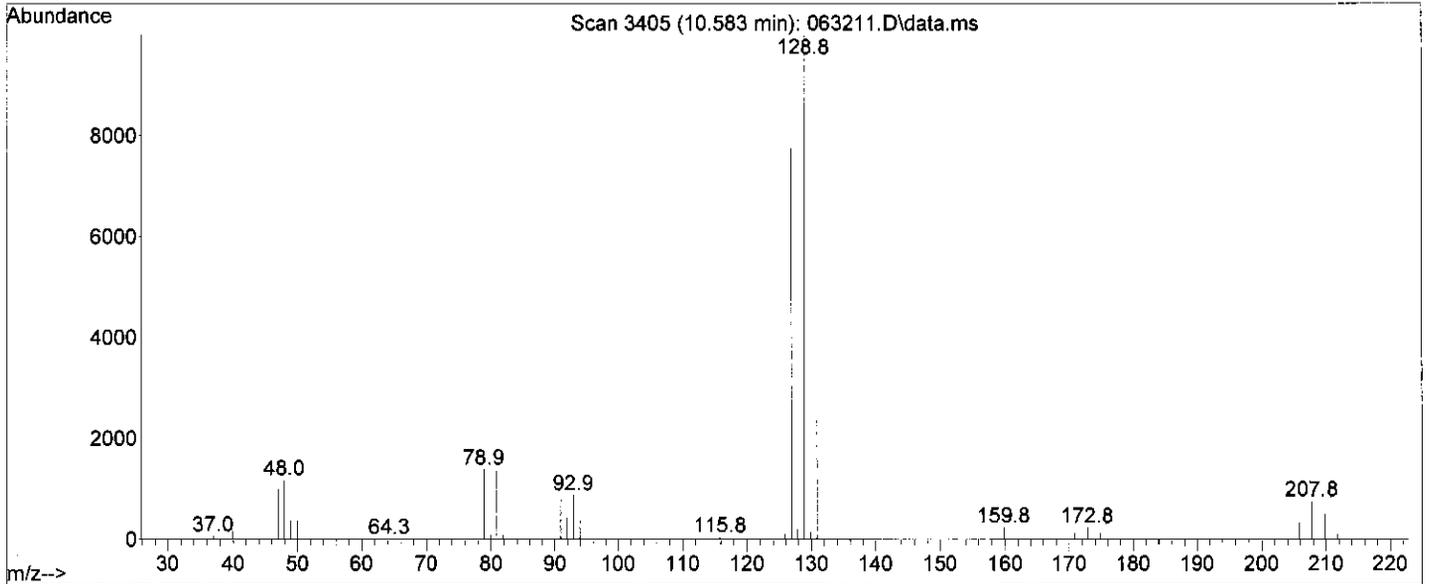
ID : Methane, bromodichloro- (CAS) \$\$ Bromodichloromethane \$\$ Bromodichloromethane \$\$ Dichloro  
bromomethane \$\$ Bromodichloro-methane \$\$ CHBrCl2 \$\$ NCI-C55243 \$\$ BdcM \$\$ Dichloromonobr  
omomethane \$\$ Monobromodichloromethane



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 98

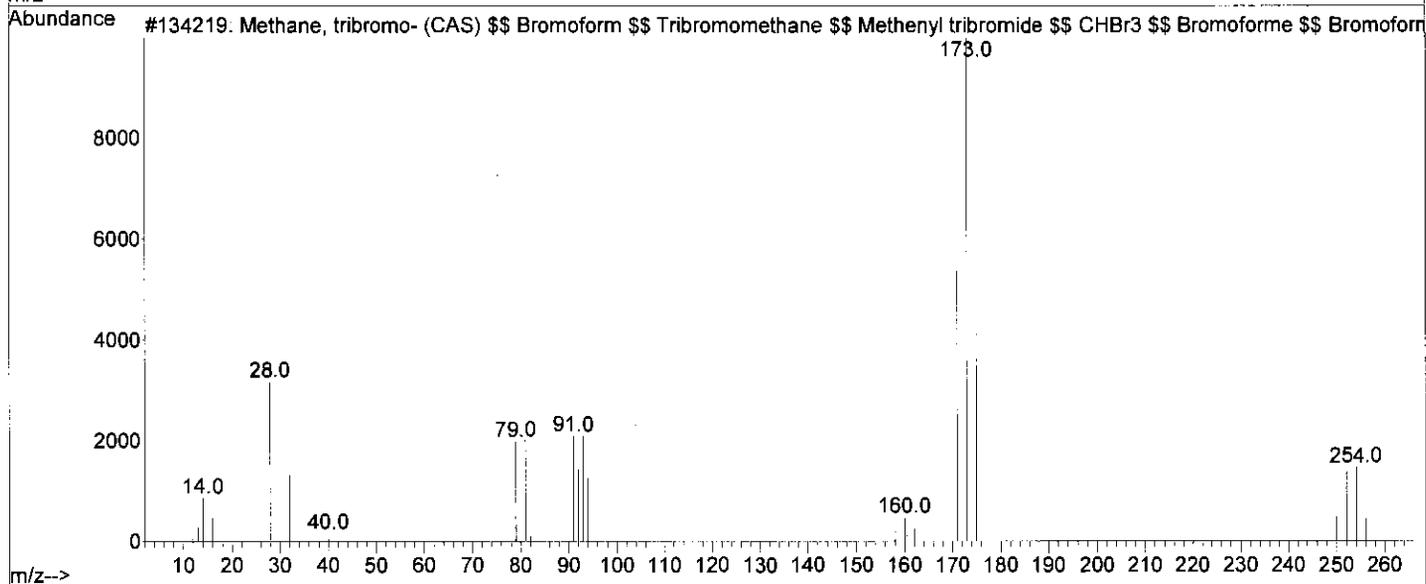
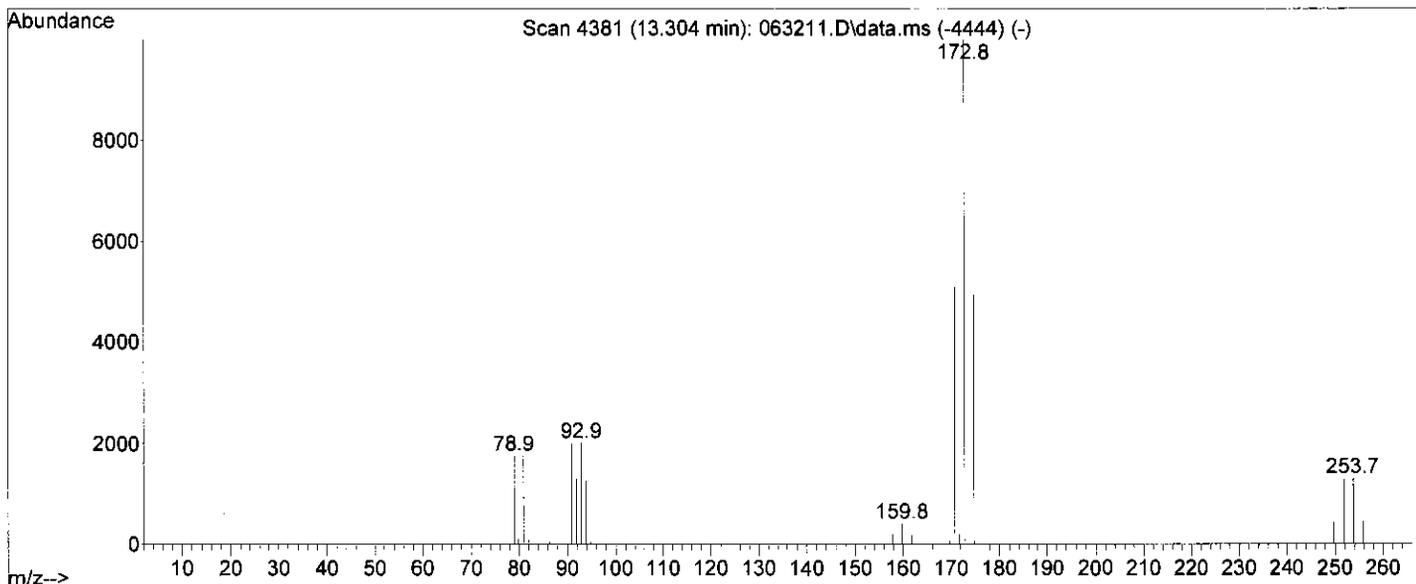
ID : Methane, dibromochloro- (CAS) \$\$ Methane, dibromochloro- (6CI,, 9CI) (CAS) \$\$ Dibromochloromethane \$\$ Chlorodibromomethane \$\$ Monochlorodibromomethane \$\$ Dibromomonochloromethane \$\$ CHClBr2 \$\$ Methane, chlorodibromo- \$\$ Cdbm \$\$ NCI-C55254



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 99

ID : Methane, tribromo- (CAS) \$\$ Bromoform \$\$ Tribromomethane \$\$ Methenyl tribromide \$\$ CHBr3  
\$\$ Bromoforme \$\$ Bromoformio \$\$ NCI-C55130 \$\$ Tribrommethaan \$\$ Tribrommethan \$\$ Tribro  
mometan \$\$ Rcra waste number U225 \$\$ UN 2515



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063211.D  
 Acq On : 14 Aug 2017 09:55 pm  
 Operator : NIVA  
 Sample : 2711959  
 Misc : RUN190632  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 15 13:51:48 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.833	168	550404	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.810	114	1183563	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.561	117	1755841	20.00	µg/L	0.00
71) I14-DICLBENZENE-D4	16.308	152	1285038	20.00	µg/L	0.00

System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.850	111	336898	20.43	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	102.15%
39) STOLUENE-D8	8.990	98	1494924	19.95	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	99.75%
59) S4BRFLUOROBENZENE	13.896	95	993414	19.95	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	99.75%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) DICLDIFLUOROMETHANE	1.915	85	53	N.D.		
3) CHLOROMETHANE	2.144	50	850	N.D.		
4) VINYL CHLORIDE	2.217	62	656	N.D.		
5) BROMOMETHANE	2.546	94	1195	N.D.		
6) CHLOROETHANE	2.766	64	886	N.D.		
7) TRICLFLUOROMETHANE	2.836	101	208	N.D.		
8) ACROLEIN	3.318	56	698	N.D.		
9) ACETONE	3.471	43	1126099	211.63	µg/L	99
10) 11-DICHLOROETHENE	4.102	61	759	N.D.		
11) IODOMETHANE	0.000		0	N.D.	d	
12) CARBON DISULFIDE	0.000		0	N.D.	d	
13) ACRYLONITRILE	4.185	53	437	N.D.		
14) DICHLOROMETHANE	0.000		0	N.D.	d	
15) TRANS12DICLETHENE	4.096	96	1573	N.D.		
16) 11-DICHLOROETHANE	4.104	63	679	N.D.		
17) VINYL ACETATE	4.634	43	525	N.D.		
18) 2-BUTANONE	5.315	43	209297	19.93	µg/L	98
19) CIS12DICHLOROETHENE	5.245	96	324	N.D.		
20) 22-DICHLOROPROPANE	0.000		0	N.D.		
21) CHLOROFORM	5.641	83	1064611	21.19	µg/L	100
22) BROMOCHLOROMETHANE	5.549	49	27	N.D.		
25) TETRAHYDROFURAN	0.000		0	N.D.	d	
26) 111-TRICHLOROETHANE	5.789	97	88	N.D.		
27) 11-DICHLOROPROPENE	0.000		0	N.D.	d	
28) 12-DICHLOROETHANE	6.391	62	59	N.D.		
29) CARBONTETRACHLORIDE	5.984	117	640	N.D.		
30) BENZENE	6.288	78	5515	N.D.		
31) TRICHLOROETHENE	7.164	132	681	N.D.		
32) 12-DICHLOROPROPANE	7.521	63	29	N.D.		
33) DIBROMOMETHANE	7.721	174	213	N.D.		
34) BROMODICL METHANE	7.961	83	938761	24.40	µg/L	100
35) 2-CLETHYLVINYLETHER	8.399	63	28	N.D.		
36) EPICHLOROHYDRIN	0.000		0	N.D.		
37) 4METHYL-2-PENTANONE	0.000		0	N.D.	d	
38) CIS13DICLPROPENE	8.633	75	296	N.D.		

Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063211.D  
 Acq On : 14 Aug 2017 09:55 pm  
 Operator : NIVA  
 Sample : 2711959  
 Misc : RUN190632  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 15 13:51:48 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

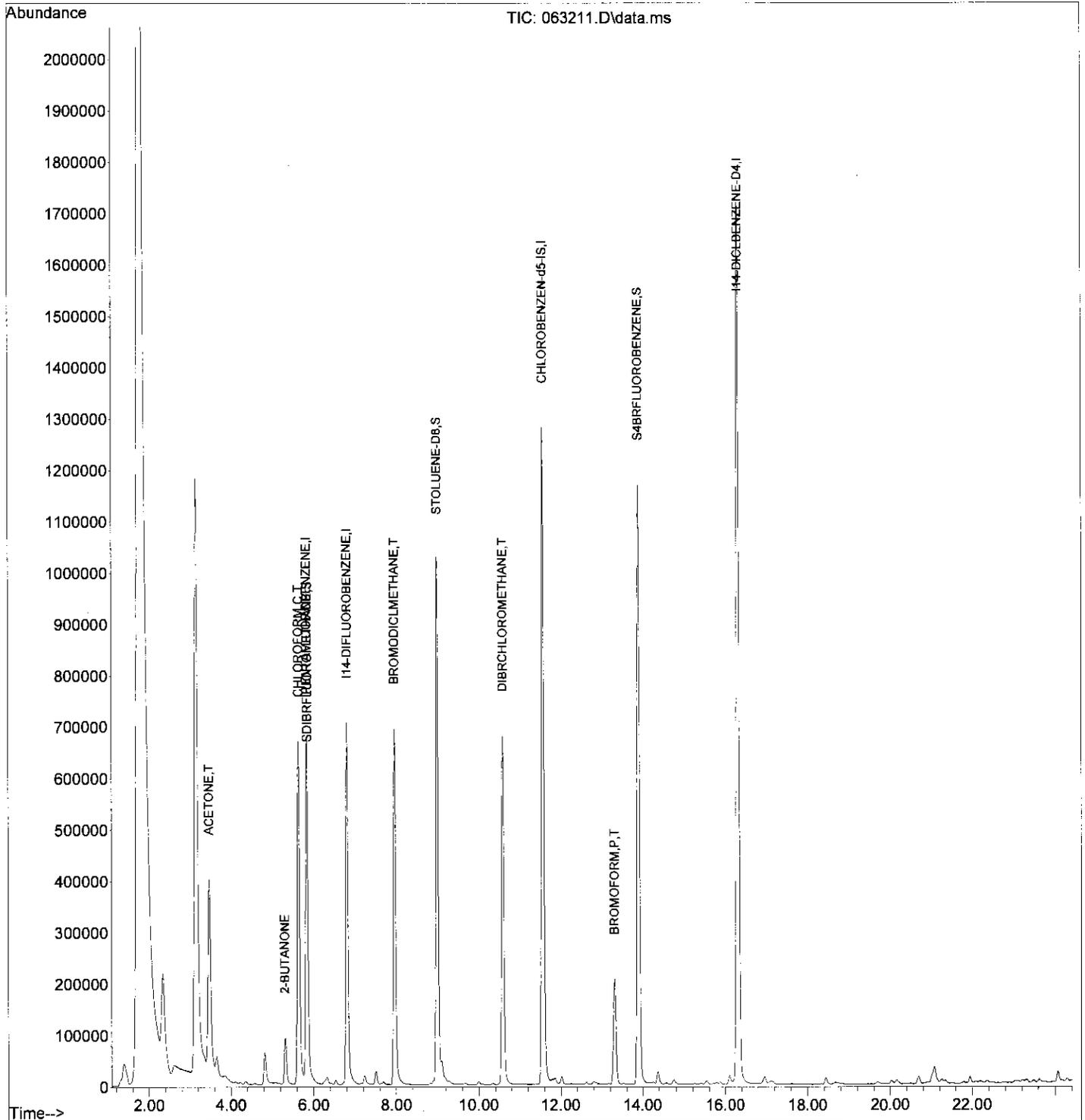
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.102	91	13112		N.D.	
41) TRANS13DICLPROPENE	9.562	75	35		N.D.	
42) 112-TRICHLOROETHANE	0.000		0		N.D.	
43) 2-HEXANONE	0.000		0		N.D. d	
44) 13-DICHLOROPROPANE	0.000		0		N.D.	
45) DIBRCHLOROMETHANE	10.583	129	831741	26.66	µg/L	100
46) TETRACHLOROETHENE	9.997	166	727		N.D.	
47) 12-DIBROMOETHANE	10.767	107	86		N.D.	
49) CHLOROBENZENE	11.606	112	206		N.D.	
50) 1-CHLOROHEXANE	11.547	91	2450		N.D.	
51) 1112-TETRACLETHANE	11.804	133	90		N.D.	
52) ETHYLBENZENE	11.785	91	8994		N.D.	
53) MP-XYLENE	12.016	91	18551		N.D.	
54) STYRENE	12.858	104	2519		N.D.	
55) O-XYLENE	12.808	91	9039		N.D.	
56) BROMOFORM	13.304	173	242232	11.08	µg/L	98
57) 1122-TETRACLETHANE	0.000		0		N.D. d	
58) ISOPROPYL BENZENE	13.516	105	542		N.D.	
60) 123-TRICLPROPANE	0.000		0		N.D.	
61) TRANS14DICL2BUTENE	14.425	53	275		N.D.	
62) BROMOBENZENE	14.174	77	109		N.D.	
63) N-PROPYLBENZENE	14.361	91	6430		N.D.	
64) 2-CHLOROTOLUENE	14.556	91	1799		N.D.	
65) 4-CHLOROTOLUENE	14.788	91	3047		N.D.	
66) 135TRIMETHYLBENZENE	14.743	105	6291		N.D.	
67) TERT-BUTYLBENZENE	15.415	119	269		N.D.	
68) 124TRIMETHYLBENZENE	15.538	105	11713		N.D.	
69) SEC-BUTYLBENZENE	15.875	105	3221		N.D.	
70) 13-DICHLOROBENZENE	16.138	146	542		N.D.	
72) 4-ISOPROPYLTOLUENE	16.202	119	7616		N.D.	
73) 14-DICHLOROBENZENE	16.350	146	5162		N.D.	
74) 12-DICHLOROBENZENE	17.158	146	4788		N.D.	
75) N-BUTYLBENZENE	17.094	91	3942		N.D.	
76) 12-DIBR-3CLPROPANE	0.000		0		N.D.	
77) 124-TRICLBENZENE	0.000		0		N.D. d	
78) NAPHTHALENE	21.263	128	20513		N.D.	
79) HEXACHLOROBUTADIENE	0.000		0		N.D. d	
80) 123-TRICLBENZENE	21.793	182	2263		N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063211.D  
 Acq On : 14 Aug 2017 09:55 pm  
 Operator : NIVA  
 Sample : 2711959  
 Misc : RUN190632  
 ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 15 13:51:48 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063212.D  
 Acq On : 14 Aug 2017 10:26 pm  
 Operator : NIVA  
 Sample : 2708496  
 Misc : RUN190632  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 15 13:53:35 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.828	168	635954	20.00	µg/L	#-0.01
23) I14-DIFLUOROBENZENE	6.807	114	1357335	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.561	117	2020569	20.00	µg/L	0.00
71) I14-DICLBENZENE-D4	16.305	152	1489938	20.00	µg/L	0.00

System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.845	111	385511	20.38	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	101.90%
39) STOLUENE-D8	8.993	98	1721883	20.04	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	100.20%
59) S4BRFLUOROBENZENE	13.896	95	1141763	19.92	µg/L	0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=	99.60%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) DICLDIFLUOROMETHANE	1.915	85	56	N.D.		
3) CHLOROMETHANE	2.150	50	877	N.D.		
4) VINYL CHLORIDE	2.197	62	27	N.D.		
5) BROMOMETHANE	2.537	94	764	N.D.		
6) CHLOROETHANE	2.889	64	671	N.D.		
7) TRICLFLUOROMETHANE	2.822	101	54	N.D.		
8) ACROLEIN	3.299	56	395	N.D.		
9) ACETONE	0.000		0	N.D.	d	
10) 11-DICHLOROETHENE	4.104	61	1772	N.D.		
11) IODOMETHANE	0.000		0	N.D.	d	
12) CARBON DISULFIDE	0.000		0	N.D.	d	
13) ACRYLONITRILE	4.185	53	36	N.D.		
14) DICHLOROMETHANE	0.000		0	N.D.	d	
15) TRANS12DICLETHENE	4.110	96	322	N.D.		
16) 11-DICHLOROETHANE	4.099	63	38	N.D.		
17) VINYL ACETATE	4.634	43	151	N.D.		
18) 2-BUTANONE	5.309	43	1910	N.D.		
19) CIS12DICHLOROETHENE	5.245	96	245	N.D.		
20) 22-DICHLOROPROPANE	5.245	77	683	N.D.		
21) CHLOROFORM	0.000		0	N.D.	d	
22) BROMOCHLOROMETHANE	5.633	49	1321	N.D.		
25) TETRAHYDROFURAN	5.605	42	28	N.D.		
26) 111-TRICHLOROETHANE	5.806	97	63	N.D.		
27) 11-DICHLOROPROPENE	0.000		0	N.D.	d	
28) 12-DICHLOROETHANE	0.000		0	N.D.		
29) CARBONTETRACHLORIDE	5.981	117	621	N.D.		
30) BENZENE	6.294	78	136	N.D.		
31) TRICHLOROETHENE	7.150	132	604	N.D.		
32) 12-DICHLOROPROPANE	7.521	63	34	N.D.		
33) DIBROMOMETHANE	0.000		0	N.D.		
34) BROMODICL METHANE	7.953	83	353	N.D.		
35) 2-CLETHYL VINYLETHER	0.000		0	N.D.		
36) EPICHLOROHYDRIN	0.000		0	N.D.		
37) 4METHYL-2-PENTANONE	8.870	43	33	N.D.		
38) CIS13DICLPROPENE	8.619	75	115	N.D.		

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063212.D  
 Acq On : 14 Aug 2017 10:26 pm  
 Operator : NIVA  
 Sample : 2708496  
 Misc : RUN190632  
 ALS Vial : 22 Sample Multiplier: 1

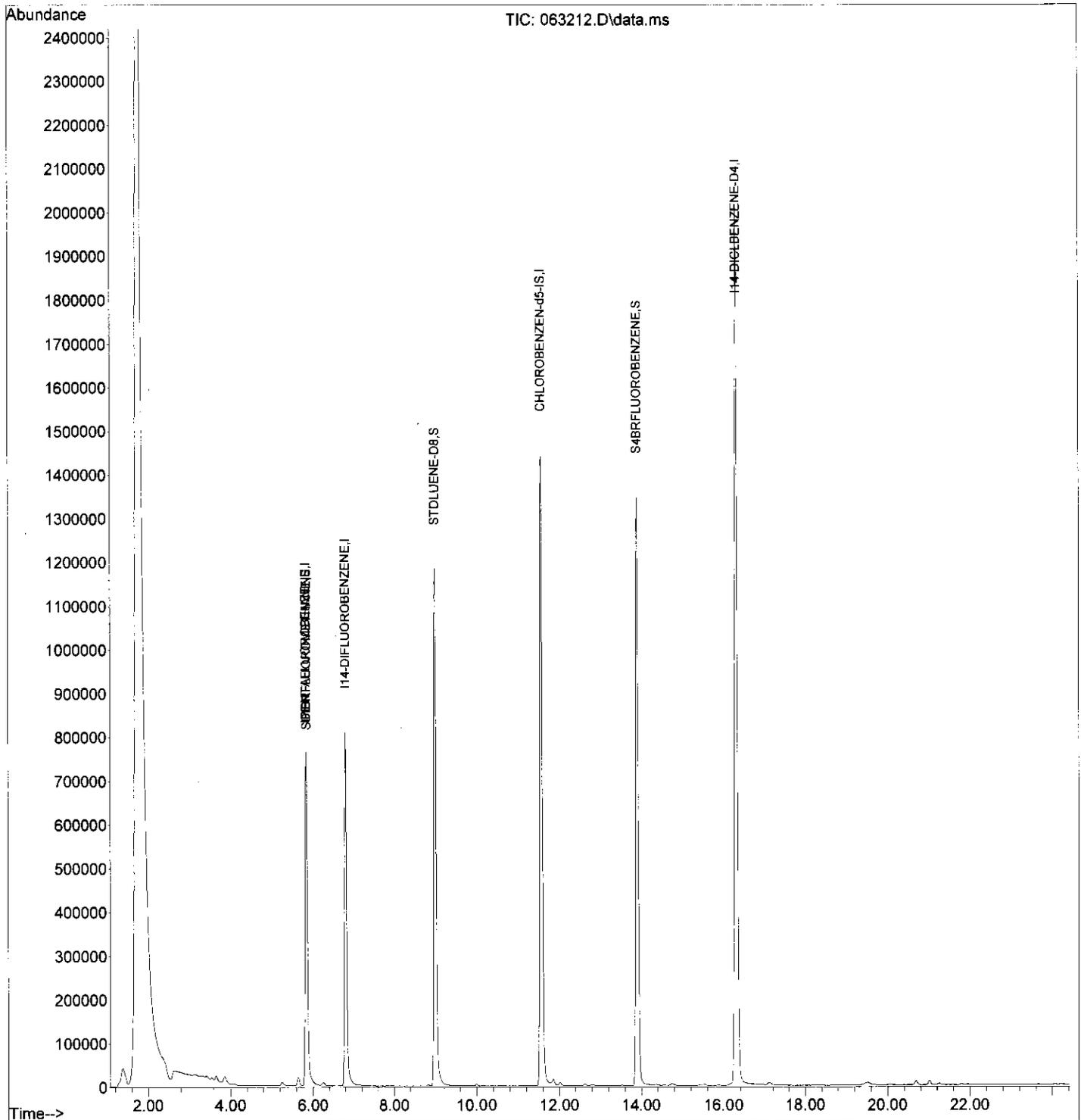
Quant Time: Aug 15 13:53:35 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.099	91	4380		N.D.	
41) TRANS13DICLPROPENE	9.565	75	32		N.D.	
42) 112-TRICHLOROETHANE	0.000		0		N.D.	
43) 2-HEXANONE	0.000		0		N.D.	
44) 13-DICHLOROPROPANE	0.000		0		N.D.	
45) DIBRCHLOROMETHANE	10.574	129	297		N.D.	
46) TETRACHLOROETHENE	9.983	166	587		N.D.	
47) 12-DIBROMOETHANE	0.000		0		N.D.	
49) CHLOROBENZENE	11.639	112	130		N.D.	
50) 1-CHLOROHEXANE	11.536	91	1547		N.D.	
51) 1112-TETRACLETHANE	11.782	133	26		N.D.	
52) ETHYLBENZENE	11.796	91	2991		N.D.	
53) MP-XYLENE	12.094	91	83		N.D.	
54) STYRENE	12.841	104	576		N.D.	
55) O-XYLENE	12.797	91	2542		N.D.	
56) BROMOFORM	13.288	173	28		N.D.	
57) 1122-TETRACLETHANE	14.336	83	29		N.D.	
58) ISOPROPYL BENZENE	13.516	105	170		N.D.	
60) 123-TRICLPROPANE	0.000		0		N.D.	
61) TRANS14DICL2BUTENE	14.425	53	27		N.D.	
62) BROMOBENZENE	14.177	77	121		N.D.	
63) N-PROPYLBENZENE	14.361	91	2378		N.D.	
64) 2-CHLOROTOLUENE	14.570	91	1391		N.D.	
65) 4-CHLOROTOLUENE	14.807	91	1827		N.D.	
66) 135TRIMETHYLBENZENE	14.741	105	6662		N.D.	
67) TERT-BUTYLBENZENE	15.396	119	783		N.D.	
68) 124TRIMETHYLBENZENE	15.535	105	3325		N.D.	
69) SEC-BUTYLBENZENE	15.867	105	4596		N.D.	
70) 13-DICHLOROBENZENE	16.140	146	1061		N.D.	
72) 4-ISOPROPYLTOLUENE	16.199	119	5175		N.D.	
73) 14-DICHLOROBENZENE	16.341	146	4534		N.D.	
74) 12-DICHLOROBENZENE	17.111	146	243		N.D.	
75) N-BUTYLBENZENE	17.086	91	6906		N.D.	
76) 12-DIBR-3CLPROPANE	0.000		0		N.D.	
77) 124-TRICL BENZENE	20.686	180	4868		N.D.	
78) NAPHTHALENE	21.255	128	6367		N.D.	
79) HEXACHLOROBUTADIENE	0.000		0		N.D. d	
80) 123-TRICL BENZENE	21.801	182	1724		N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063212.D  
 Acq On : 14 Aug 2017 10:26 pm  
 Operator : NIVA  
 Sample : 2708496  
 Misc : RUN190632  
 ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 15 13:53:35 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063213.D  
 Acq On : 14 Aug 2017 10:57 pm  
 Operator : NIVA  
 Sample : 2708591  
 Misc : RUN190632  
 ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 15 13:54:15 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.831	168	568096	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.807	114	1224457	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.567	117	1848584	20.00	µg/L	0.00
71) I14-DICL BENZENE-D4	16.308	152	1349192	20.00	µg/L	0.00

System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.850	111	351048	20.57	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	102.85%	
39) STOLUENE-D8	8.990	98	1567795	20.23	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	101.15%	
59) S4BRFLUOROBENZENE	13.898	95	1040484	19.85	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.25%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) DICLDIFLUOROMETHANE	0.000		0		N.D.	
3) CHLOROMETHANE	2.144	50	1688		N.D.	
4) VINYL CHLORIDE	0.000		0		N.D.	
5) BROMOMETHANE	2.534	94	1029		N.D.	
6) CHLOROETHANE	2.989	64	1046		N.D.	
7) TRICLFLUOROMETHANE	2.852	101	70		N.D.	
8) ACROLEIN	3.299	56	135		N.D.	
9) ACETONE	0.000		0		N.D. d	
10) 11-DICHLOROETHENE	4.113	61	602		N.D.	
11) IODOMETHANE	0.000		0		N.D. d	
12) CARBON DISULFIDE	0.000		0		N.D. d	
13) ACRYLONITRILE	0.000		0		N.D.	
14) DICHLOROMETHANE	0.000		0		N.D. d	
15) TRANS12DICLETHENE	4.107	96	326		N.D.	
16) 11-DICHLOROETHANE	4.110	63	34		N.D.	
17) VINYL ACETATE	4.640	43	29		N.D.	
18) 2-BUTANONE	5.820	43	262		N.D.	
19) CIS12DICHLOROETHENE	5.245	96	73		N.D.	
20) 22-DICHLOROPROPANE	0.000		0		N.D.	
21) CHLOROFORM	5.630	83	406		N.D.	
22) BROMOCHLOROMETHANE	5.624	49	27		N.D.	
25) TETRAHYDROFURAN	0.000		0		N.D.	
26) 111-TRICHLOROETHANE	5.794	97	28		N.D.	
27) 11-DICHLOROPROPENE	0.000		0		N.D. d	
28) 12-DICHLOROETHANE	6.383	62	30		N.D.	
29) CARBONTETRACHLORIDE	5.987	117	420		N.D.	
30) BENZENE	6.294	78	1762		N.D.	
31) TRICHLOROETHENE	7.150	132	177		N.D.	
32) 12-DICHLOROPROPANE	7.314	63	30		N.D.	
33) DIBROMOMETHANE	0.000		0		N.D.	
34) BROMODICL METHANE	7.956	83	28		N.D.	
35) 2-CLETHYL VINYLETHER	0.000		0		N.D.	
36) EPICHLOROHYDRIN	0.000		0		N.D.	
37) 4METHYL-2-PENTANONE	8.895	43	27		N.D.	
38) CIS13DICLPROPENE	8.622	75	86		N.D.	

## Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063213.D  
 Acq On : 14 Aug 2017 10:57 pm  
 Operator : NIVA  
 Sample : 2708591  
 Misc : RUN190632  
 ALS Vial : 23 Sample Multiplier: 1

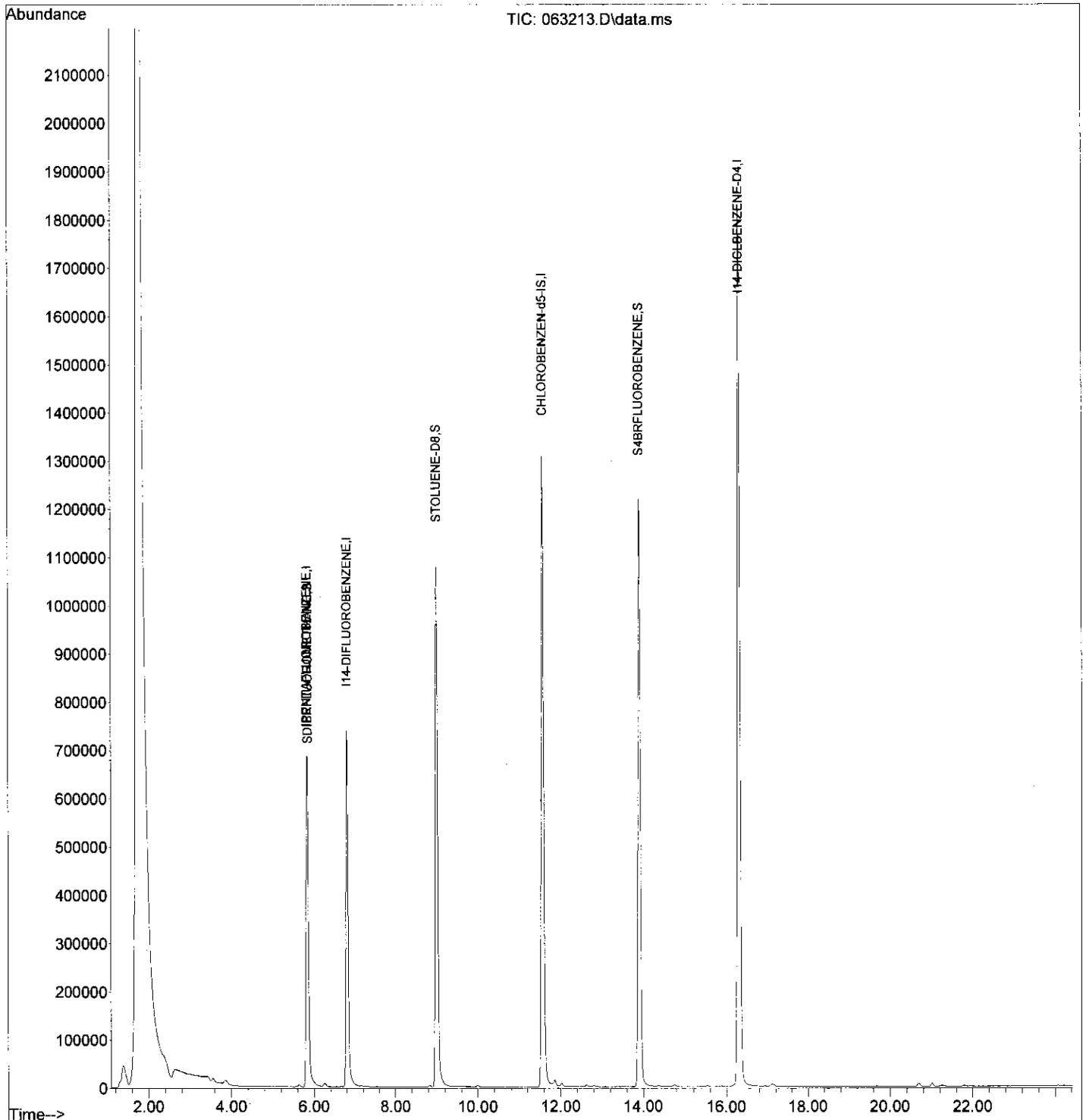
Quant Time: Aug 15 13:54:15 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.096	91	5344			N.D.
41) TRANS13DICLPROPENE	0.000		0			N.D.
42) 112-TRICHLOROETHANE	0.000		0			N.D.
43) 2-HEXANONE	0.000		0			N.D.
44) 13-DICHLOROPROPANE	0.000		0			N.D.
45) DIBRCHLOROMETHANE	0.000		0			N.D.
46) TETRACHLOROETHENE	9.989	166	207			N.D.
47) 12-DIBROMOETHANE	0.000		0			N.D.
49) CHLOROBENZENE	11.640	112	259			N.D.
50) 1-CHLOROHEXANE	11.559	91	1646			N.D.
51) 1112-TETRACLETHANE	0.000		0			N.D.
52) ETHYLBENZENE	11.782	91	5006			N.D.
53) MP-XYLENE	12.005	91	9577			N.D.
54) STYRENE	12.844	104	391			N.D.
55) O-XYLENE	12.800	91	3907			N.D.
56) BROMOFORM	0.000		0			N.D.
57) 1122-TETRACLETHANE	0.000		0			N.D.
58) ISOPROPYL BENZENE	13.511	105	710			N.D.
60) 123-TRICLPROPANE	0.000		0			N.D.
61) TRANS14DICL2BUTENE	14.439	53	120			N.D.
62) BROMOBENZENE	14.177	77	65			N.D.
63) N-PROPYLBENZENE	14.381	91	3476			N.D.
64) 2-CHLOROTOLUENE	14.548	91	1037			N.D.
65) 4-CHLOROTOLUENE	14.805	91	2513			N.D.
66) 135TRIMETHYLBENZENE	14.743	105	5225			N.D.
67) TERT-BUTYLBENZENE	15.421	119	849			N.D.
68) 124TRIMETHYLBENZENE	15.532	105	3173			N.D.
69) SEC-BUTYLBENZENE	15.870	105	2874			N.D.
70) 13-DICHLOROBENZENE	16.193	146	334			N.D.
72) 4-ISOPROPYLTOLUENE	16.205	119	2450			N.D.
73) 14-DICHLOROBENZENE	16.344	146	1866			N.D.
74) 12-DICHLOROBENZENE	17.147	146	636			N.D.
75) N-BUTYLBENZENE	17.097	91	2934			N.D.
76) 12-DIBR-3CLPROPANE	0.000		0			N.D.
77) 124-TRICL BENZENE	20.689	180	4889			N.D.
78) NAPHTHALENE	21.258	128	3021			N.D.
79) HEXACHLOROBUTADIENE	21.004	225	1819			N.D.
80) 123-TRICL BENZENE	21.790	182	733			N.D.

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063213.D  
 Acq On : 14 Aug 2017 10:57 pm  
 Operator : NIVA  
 Sample : 2708591  
 Misc : RUN190632  
 ALS Vial : 23 Sample Multiplier: 1

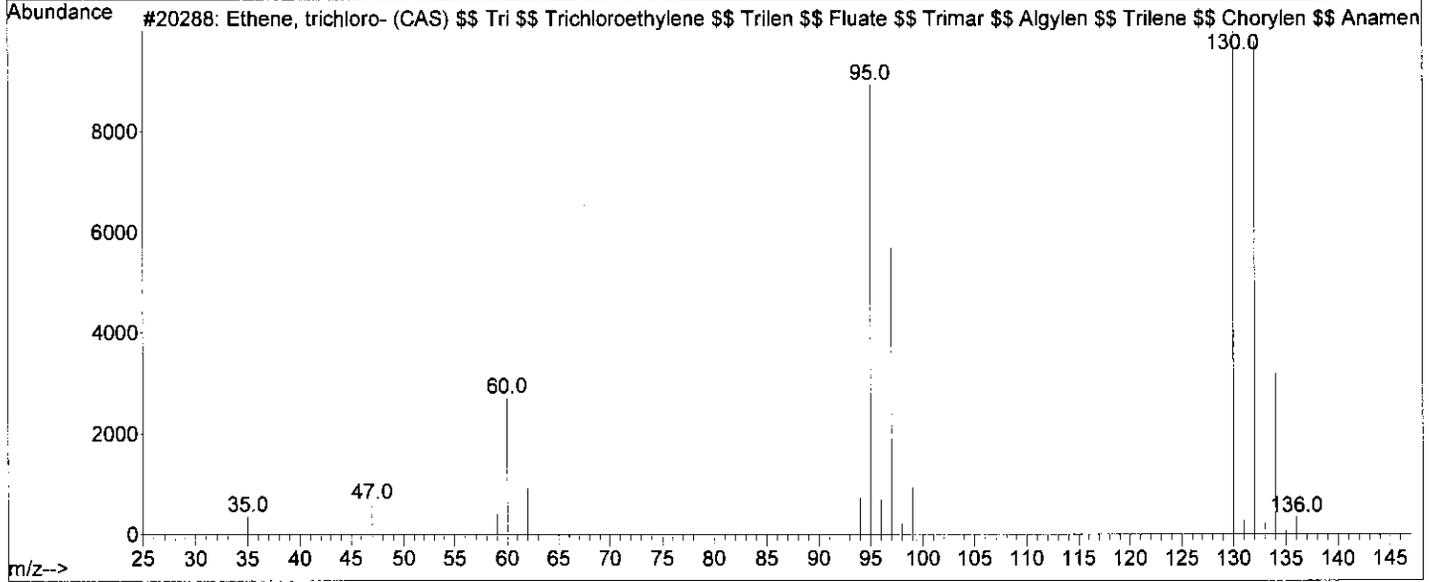
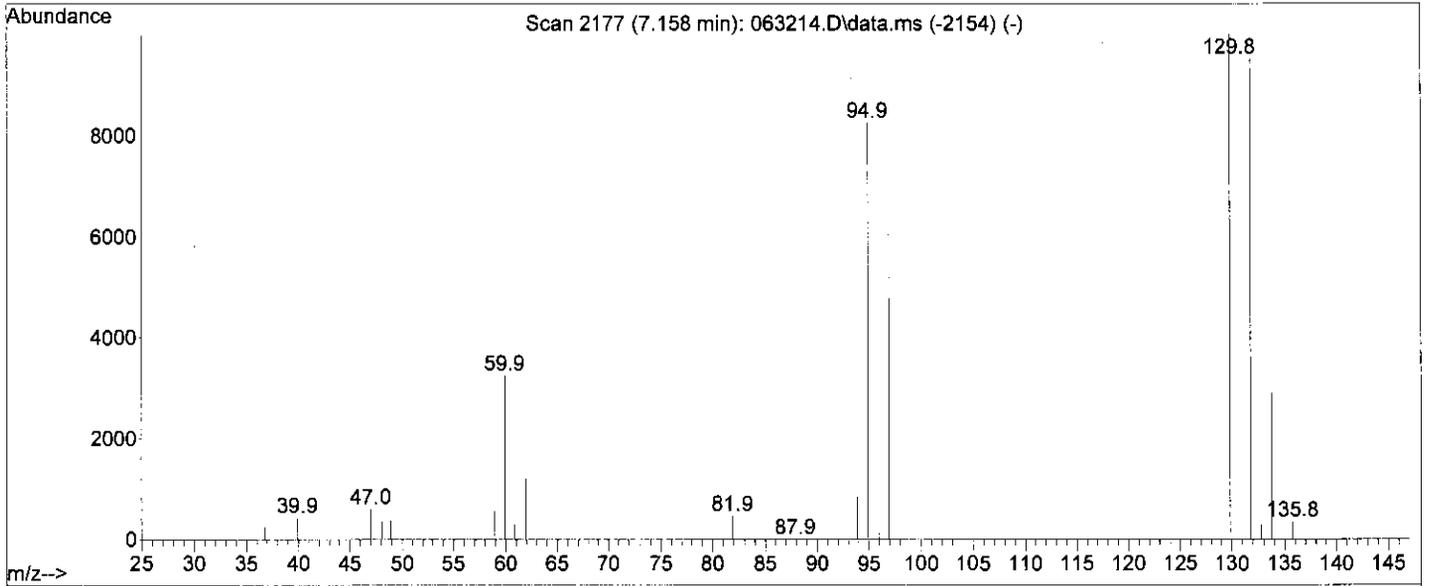
Quant Time: Aug 15 13:54:15 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 98

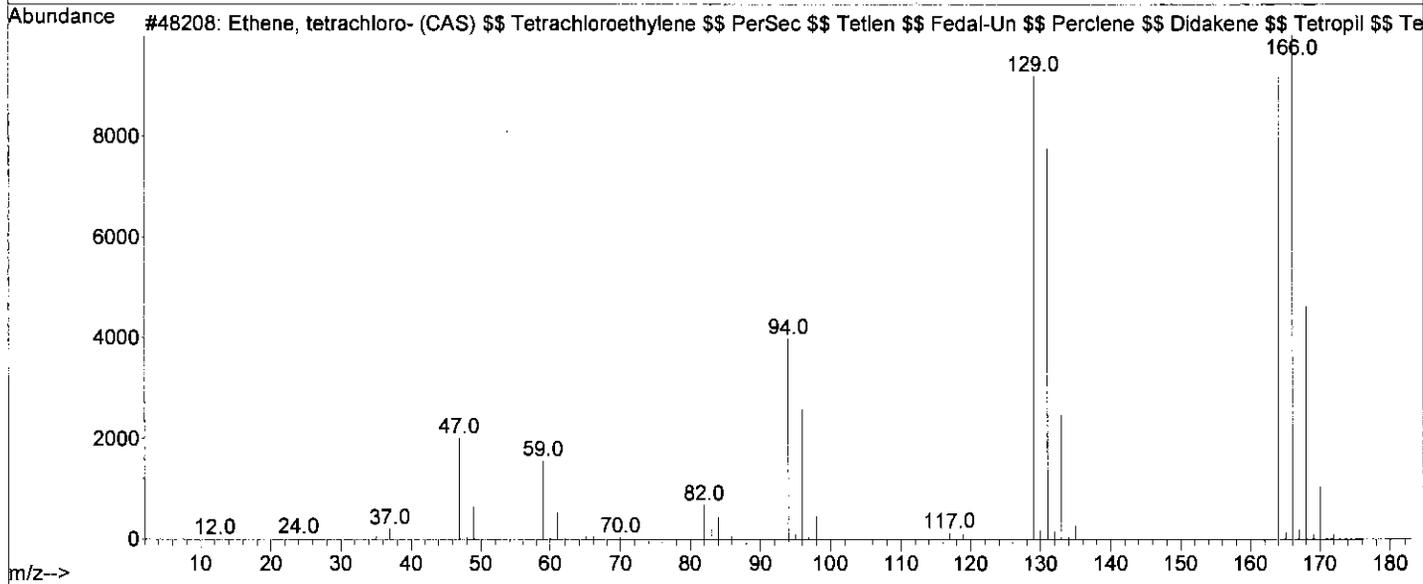
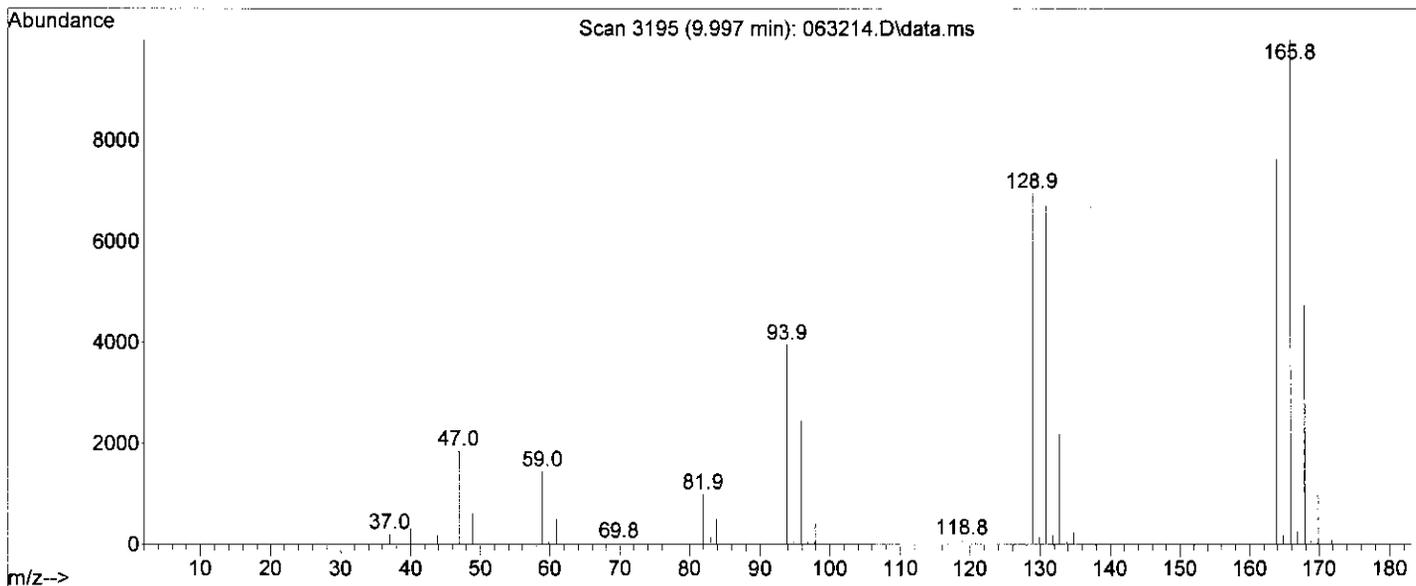
ID : Ethene, trichloro- (CAS) \$\$ Tri \$\$ Trichloroethylene \$\$ Trilen \$\$ Fluate \$\$ Trimar \$\$ Al  
gylen \$\$ Trilene \$\$ Chorylen \$\$ Anamenth \$\$ Triclene \$\$ Narcogen \$\$ Narkogen \$\$ Trielene  
\$\$ Westrosol \$\$ Tri-clene \$\$ Narkosoid \$\$ Chlorilen \$\$ Gemalgene \$\$ Chlorylen



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 99

ID : Ethene, tetrachloro- (CAS) \$\$ Tetrachloroethylene \$\$ PerSec \$\$ Tetlen \$\$ Fedal-Un \$\$ Per  
clene \$\$ Didakene \$\$ Tetropil \$\$ Tetracap \$\$ Antisal 1 \$\$ Tetraguer \$\$ Tetraleno \$\$ Anki  
lostin \$\$ Perchlorethylene \$\$ Perchloroethylene \$\$ Tetrachloroethene \$\$ Tetrach



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063214.D  
 Acq On : 14 Aug 2017 11:26 pm  
 Operator : NIVA  
 Sample : 2710173  
 Misc : RUN190632  
 ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 15 13:54:50 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) IPENTAFLUOROBENZENE	5.831	168	577581	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.810	114	1239709	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.564	117	1886352	20.00	µg/L	0.00
71) I14-DICLBENZENE-D4	16.308	152	1396112	20.00	µg/L	0.00
<b>System Monitoring Compounds</b>						
24) SDIBRFLUOROMETHANE	5.845	111	357591	20.70	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery = 103.50%			
39) STOLUENE-D8	8.993	98	1599675	20.38	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery = 101.90%			
59) S4BRFLUOROBENZENE	13.898	95	1066884	19.94	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery = 99.70%			
<b>Target Compounds</b>						
2) DICLDIFLUOROMETHANE	2.465	85	29	N.D.		Qvalue
3) CHLOROMETHANE	2.130	50	1022	N.D.		
4) VINYL CHLORIDE	2.257	62	1600	N.D.		
5) BROMOMETHANE	2.543	94	1526	N.D.		
6) CHLOROETHANE	2.668	64	1508	N.D.		
7) TRICLFLUOROMETHANE	0.000		0	N.D.	d	
8) ACROLEIN	3.315	56	254	N.D.		
9) ACETONE	0.000		0	N.D.	d	
10) 11-DICHLOROETHENE	4.099	61	394	N.D.		
11) IODOMETHANE	3.547	142	6465	N.D.		
12) CARBON DISULFIDE	0.000		0	N.D.	d	
13) ACRYLONITRILE	0.000		0	N.D.		
14) DICHLOROMETHANE	3.865	84	3895	N.D.		
15) TRANS12DICLETHENE	4.105	96	753	N.D.		
16) 11-DICHLOROETHANE	0.000		0	N.D.	d	
17) VINYL ACETATE	4.634	43	202	N.D.		
18) 2-BUTANONE	5.326	43	525	N.D.		
19) CIS12DICHLOROETHENE	0.000		0	N.D.	d	
20) 22-DICHLOROPROPANE	0.000		0	N.D.		
21) CHLOROFORM	0.000		0	N.D.	d	
22) BROMOCHLOROMETHANE	5.636	49	1996	N.D.		
25) TETRAHYDROFURAN	0.000		0	N.D.		
26) 111-TRICHLOROETHANE	5.808	97	29	N.D.		
27) 11-DICHLOROPROPENE	0.000		0	N.D.	d	
28) 12-DICHLOROETHANE	0.000		0	N.D.		
29) CARBONTETRACHLORIDE	5.995	117	1093	N.D.		
30) BENZENE	6.294	78	367	N.D.		
31) TRICHLOROETHENE	7.158	132	21351	0.66	µg/L	96
32) 12-DICHLOROPROPANE	7.529	63	26	N.D.		
33) DIBROMOMETHANE	0.000		0	N.D.		
34) BROMODICLMETHANE	7.959	83	324	N.D.		
35) 2-CLETHYLVINYLETHER	8.410	63	32	N.D.		
36) EPICHLOROHYDRIN	0.000		0	N.D.		
37) 4METHYL-2-PENTANONE	8.901	43	33	N.D.		
38) CIS13DICLPROPENE	8.636	75	79	N.D.		

Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063214.D  
 Acq On : 14 Aug 2017 11:26 pm  
 Operator : NIVA  
 Sample : 2710173  
 Misc : RUN190632  
 ALS Vial : 24 Sample Multiplier: 1

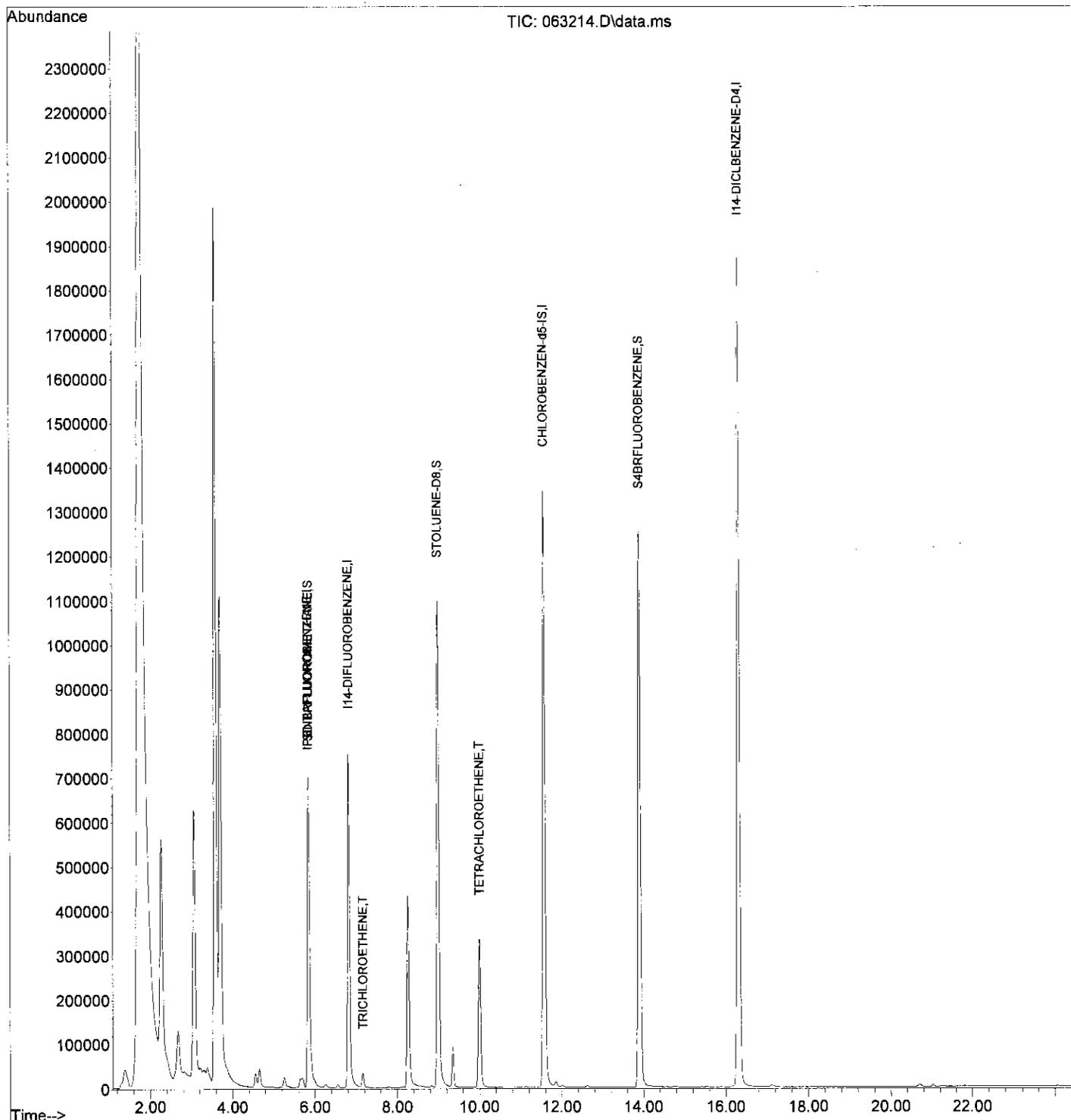
Quant Time: Aug 15 13:54:50 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
40) TOLUENE	9.096	91	3250	N.D.	
41) TRANS13DICLPROPENE	9.587	75	27	N.D.	
42) 112-TRICHLOROETHANE	9.952	97	26	N.D.	
43) 2-HEXANONE	0.000		0	N.D.	
44) 13-DICHLOROPROPANE	0.000		0	N.D.	
45) DIBRCHLOROMETHANE	10.580	129	26	N.D.	
46) TETRACHLOROETHENE	9.997	166	227622	6.65 µg/L	99
47) 12-DIBROMOETHANE	0.000		0	N.D.	
49) CHLORO BENZENE	11.628	112	415	N.D.	
50) 1-CHLOROHEXANE	11.559	91	4228	N.D.	
51) 1112-TETRACLETHANE	0.000		0	N.D.	
52) ETHYLBENZENE	11.799	91	1661	N.D.	
53) MP-XYLENE	12.016	91	7057	N.D.	
54) STYRENE	12.858	104	688	N.D.	
55) O-XYLENE	12.794	91	2813	N.D.	
56) BROMOFORM	13.313	173	34	N.D.	
57) 1122-TETRACLETHANE	14.333	83	30	N.D.	
58) ISOPROPYL BENZENE	13.516	105	276	N.D.	
60) 123-TRICLPROPANE	0.000		0	N.D.	
61) TRANS14DICL2BUTENE	14.434	53	29	N.D.	
62) BROMOBENZENE	14.177	77	52	N.D.	
63) N-PROPYLBENZENE	14.375	91	1231	N.D.	
64) 2-CHLOROTOLUENE	14.570	91	583	N.D.	
65) 4-CHLOROTOLUENE	14.808	91	850	N.D.	
66) 13TRIMETHYLBENZENE	14.715	105	365	N.D.	
67) TERT-BUTYLBENZENE	15.418	119	1581	N.D.	
68) 124TRIMETHYLBENZENE	15.535	105	2233	N.D.	
69) SEC-BUTYLBENZENE	15.884	105	1740	N.D.	
70) 13-DICHLORO BENZENE	16.157	146	678	N.D.	
72) 4-ISOPROPYLTOLUENE	16.193	119	3073	N.D.	
73) 14-DICHLORO BENZENE	16.344	146	3224	N.D.	
74) 12-DICHLORO BENZENE	17.170	146	1777	N.D.	
75) N-BUTYLBENZENE	17.091	91	3041	N.D.	
76) 12-DIBR-3CLPROPANE	0.000		0	N.D.	
77) 124-TRICL BENZENE	20.697	180	2519	N.D.	
78) NAPHTHALENE	21.258	128	2959	N.D.	
79) HEXACHLOROBUTADIENE	20.998	225	1385	N.D.	
80) 123-TRICL BENZENE	21.807	182	1457	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
Data File : 063214.D  
Acq On : 14 Aug 2017 11:26 pm  
Operator : NIVA  
Sample : 2710173  
Misc : RUN190632  
ALS Vial : 24 Sample Multiplier: 1

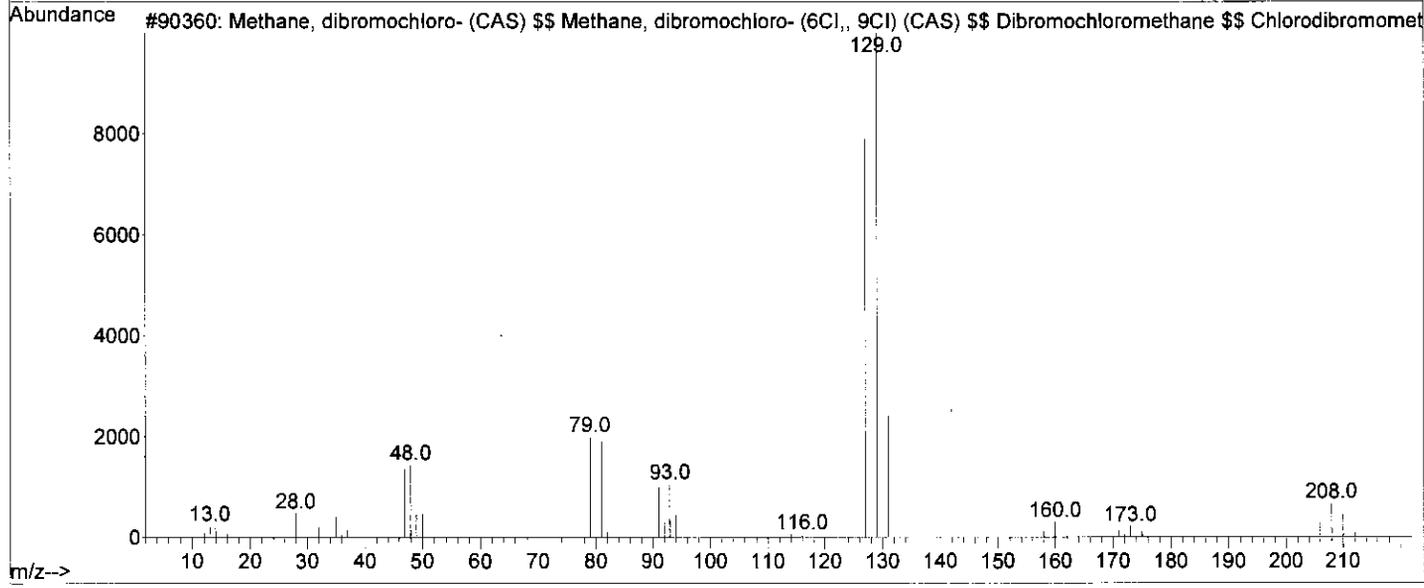
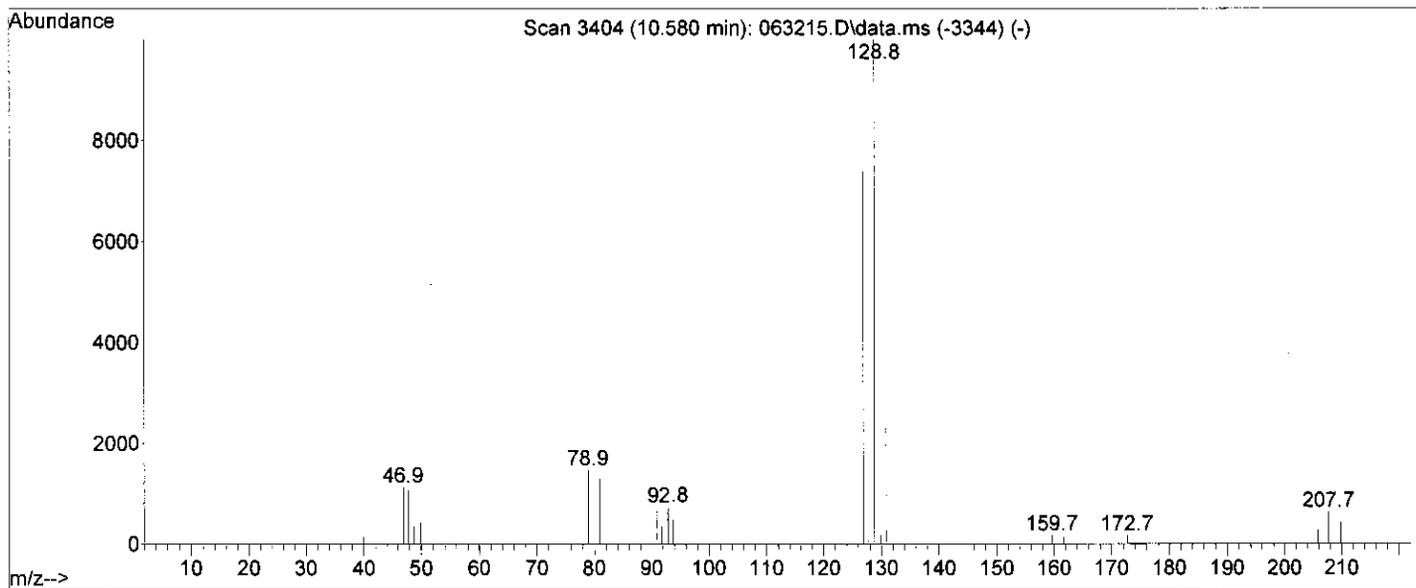
Quant Time: Aug 15 13:54:50 2017  
Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
Quant Title : Analysis of VOC'S by 8260B,624  
QLast Update : Tue Aug 15 13:42:40 2017  
Response via : Initial Calibration



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 98

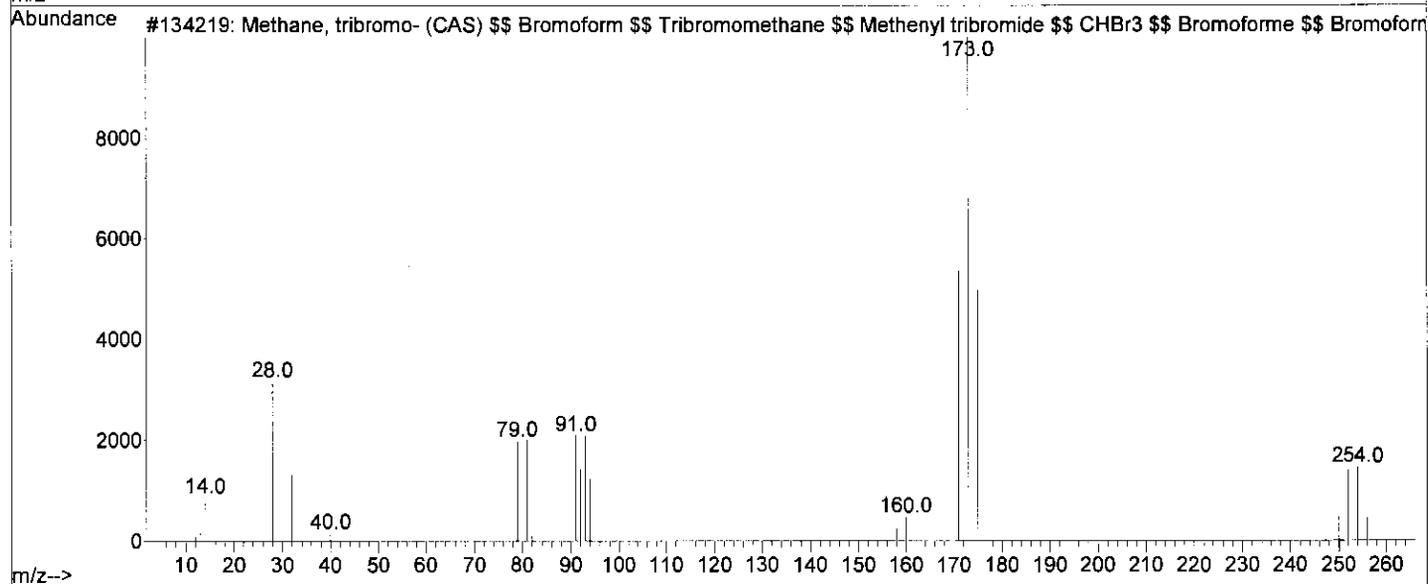
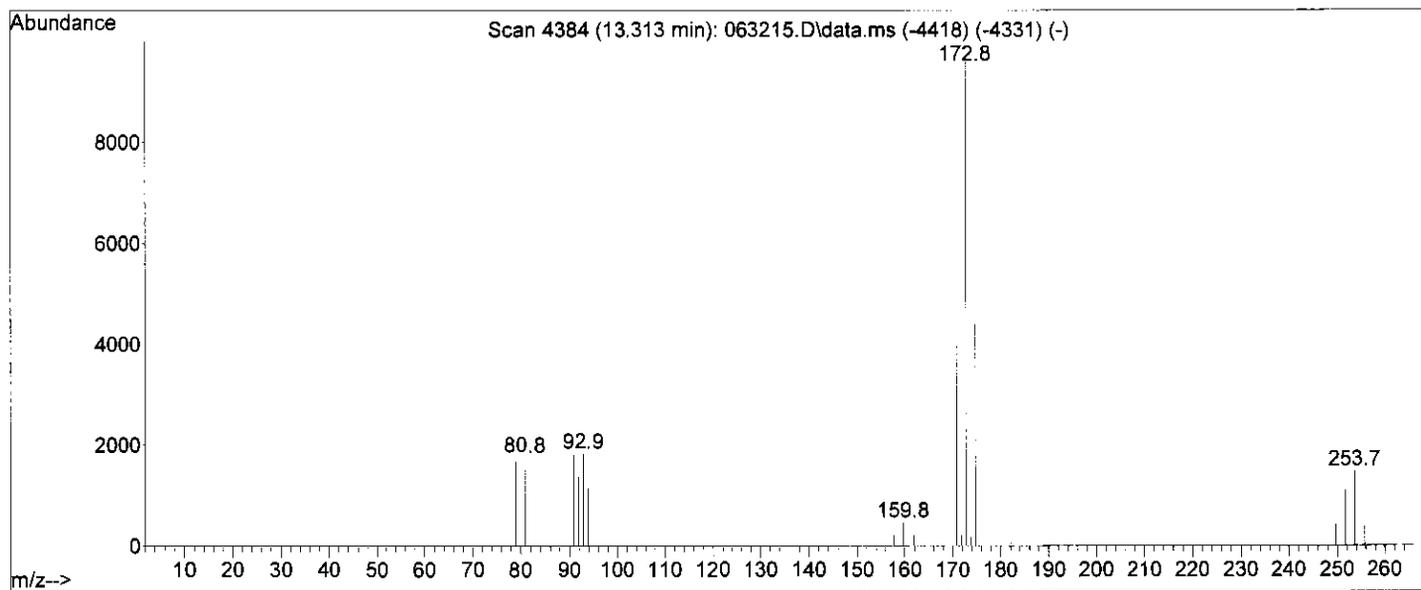
ID : Methane, dibromochloro- (CAS) \$\$ Methane, dibromochloro- (6CI,, 9CI) (CAS) \$\$ Dibromochloromethane \$\$ Chlorodibromomethane \$\$ Monochlorodibromomethane \$\$ Dibromomonochloromethane \$\$ CHClBr2 \$\$ Methane, chlorodibromo- \$\$ Cdbm \$\$ NCI-C55254



Library Searched : D:\MassHunter\Library\WILEY275.L

Quality : 98

ID : Methane, tribromo- (CAS) \$\$ Bromoform \$\$ Tribromomethane \$\$ Methenyl tribromide \$\$ CHBr3  
\$\$ Bromoforme \$\$ Bromoformio \$\$ NCI-C55130 \$\$ Tribrommethaan \$\$ Tribrommethan \$\$ Tribro  
mometan \$\$ Rcra waste number U225 \$\$ UN 2515



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063215.D  
 Acq On : 14 Aug 2017 11:57 pm  
 Operator : NIVA  
 Sample : 2710174  
 Misc : RUN190632  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 15 13:56:38 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.833	168	580236	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.807	114	1247555	20.00	µg/L	0.00
48) CHLOROBENZENE-d5-IS	11.561	117	1885577	20.00	µg/L	0.00
71) I14-DICL BENZENE-D4	16.305	152	1389059	20.00	µg/L	0.00
System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.847	111	358163	20.60	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	103.00%	
39) STOLUENE-D8	8.993	98	1581208	20.02	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	100.10%	
59) S4BRFLUOROBENZENE	13.895	95	1063812	19.89	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.45%	
Target Compounds						
						Qvalue
2) DICLDIFLUOROMETHANE	0.000		0			N.D.
3) CHLOROMETHANE	2.155	50	752			N.D.
4) VINYL CHLORIDE	0.000		0			N.D.
5) BROMOMETHANE	2.526	94	610			N.D.
6) CHLOROETHANE	2.992	64	931			N.D.
7) TRICLFLUOROMETHANE	2.858	101	28			N.D.
8) ACRYLEIN	3.312	56	253			N.D.
9) ACETONE	0.000		0			N.D. d
10) 11-DICHLOROETHENE	4.099	61	286			N.D.
11) IODOMETHANE	3.549	142	3711			N.D.
12) CARBON DISULFIDE	0.000		0			N.D. d
13) ACRYLONITRILE	0.000		0			N.D.
14) DICHLOROMETHANE	3.865	84	2236			N.D.
15) TRANS12DICLETHENE	4.113	96	241			N.D.
16) 11-DICHLOROETHANE	4.659	63	1435			N.D.
17) VINYL ACETATE	4.629	43	63			N.D.
18) 2-BUTANONE	5.312	43	913			N.D.
19) CIS12DICHLOROETHENE	5.251	96	36			N.D.
20) 22-DICHLOROPROPANE	5.234	77	27			N.D.
21) CHLOROFORM	5.638	83	1009			N.D.
22) BROMOCHLOROMETHANE	5.627	49	358			N.D.
25) TETRAHYDROFURAN	5.621	42	859			N.D.
26) 111-TRICHLOROETHANE	0.000		0			N.D.
27) 11-DICHLOROPROPENE	0.000		0			N.D. d
28) 12-DICHLOROETHANE	0.000		0			N.D.
29) CARBONTETRACHLORIDE	5.998	117	184			N.D.
30) BENZENE	6.296	78	490			N.D.
31) TRICHLOROETHENE	7.144	132	136			N.D.
32) 12-DICHLOROPROPANE	7.331	63	26			N.D.
33) DIBROMOMETHANE	0.000		0			N.D.
34) BROMODICL METHANE	7.953	83	3100			N.D.
35) 2-CLETHYL VINYLETHER	8.338	63	30			N.D.
36) EPICHLOROHYDRIN	0.000		0			N.D.
37) 4METHYL-2-PENTANONE	8.867	43	26			N.D.
38) CIS13DICLPROPENE	8.628	75	52			N.D.

Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063215.D  
 Acq On : 14 Aug 2017 11:57 pm  
 Operator : NIVA  
 Sample : 2710174  
 Misc : RUN190632  
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 15 13:56:38 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

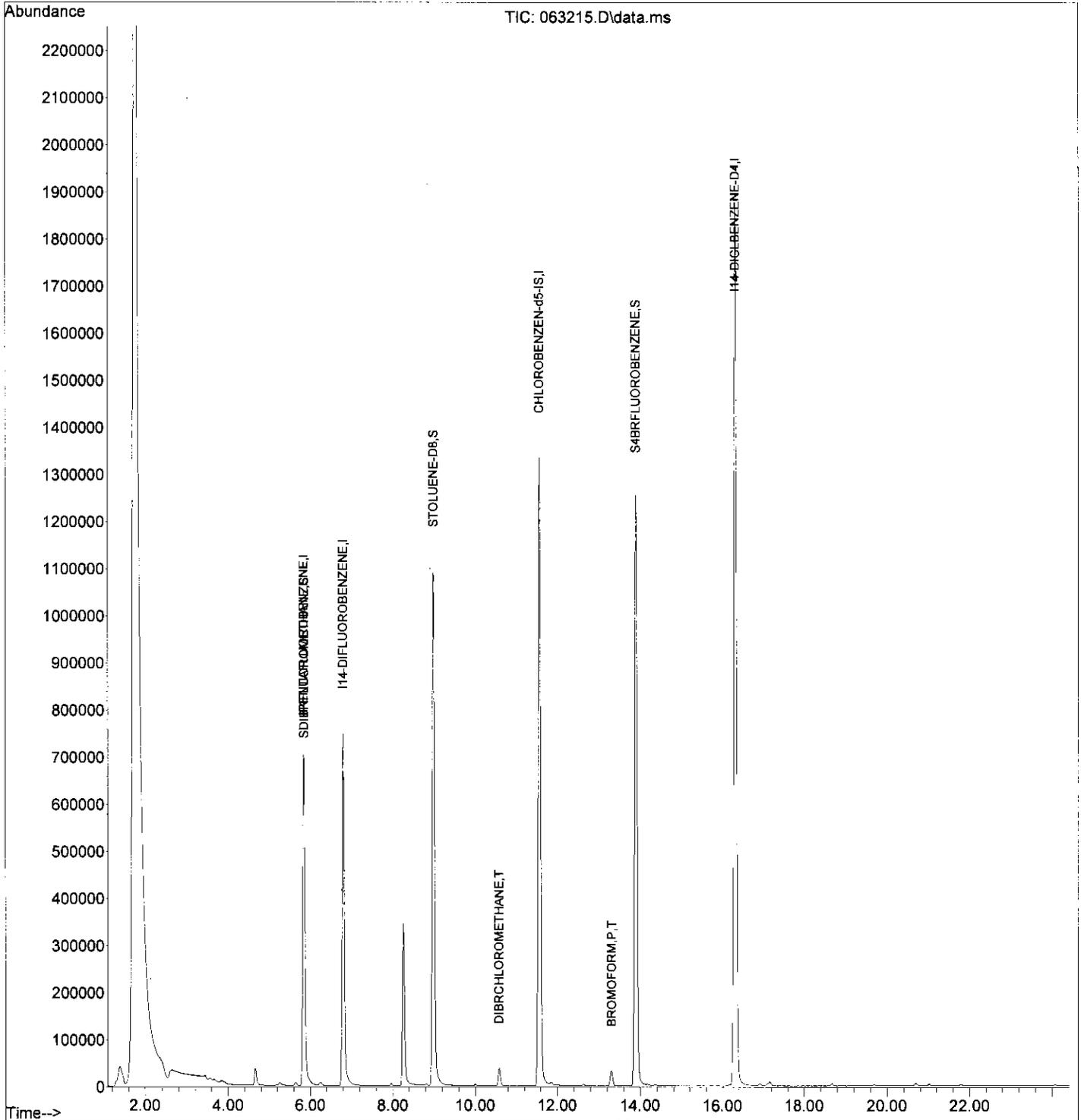
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.093	91	1010		N.D.	
41) TRANS13DICLPROPENE	9.567	75	31		N.D.	
42) 112-TRICHLOROETHANE	0.000		0		N.D.	
43) 2-HEXANONE	0.000		0		N.D.	
44) 13-DICHLOROPROPANE	0.000		0		N.D.	
45) DIBRCHLOROMETHANE	10.580	129	48708	1.48	µg/L	95
46) TETRACHLOROETHENE	10.005	166	905		N.D.	
47) 12-DIBROMOETHANE	10.772	107	30		N.D.	
49) CHLOROENZENE	11.609	112	152		N.D.	
50) 1-CHLOROHEXANE	11.550	91	4513		N.D.	
51) 1112-TETRACLETHANE	0.000		0		N.D.	
52) ETHYLBENZENE	11.787	91	1744		N.D.	
53) MP-XYLENE	12.010	91	622		N.D.	
54) STYRENE	0.000		0		N.D.	
55) O-XYLENE	12.783	91	421		N.D.	
56) BROMOFORM	13.313	173	39185	1.67	µg/L	97
57) 1122-TETRACLETHANE	0.000		0		N.D.	
58) ISOPROPYL BENZENE	13.516	105	328		N.D.	
60) 123-TRICLPROPANE	0.000		0		N.D.	
61) TRANS14DICL2BUTENE	0.000		0		N.D.	
62) BROMOBENZENE	14.166	77	126		N.D.	
63) N-PROPYLBENZENE	14.378	91	1270		N.D.	
64) 2-CHLOROTOLUENE	14.565	91	961		N.D.	
65) 4-CHLOROTOLUENE	14.791	91	714		N.D.	
66) 135TRIMETHYLBENZENE	14.743	105	135		N.D.	
67) TERT-BUTYLBENZENE	15.412	119	648		N.D.	
68) 124TRIMETHYLBENZENE	15.530	105	297		N.D.	
69) SEC-BUTYLBENZENE	15.873	105	2036		N.D.	
70) 13-DICHLOROENZENE	16.146	146	489		N.D.	
72) 4-ISOPROPYLTOLUENE	16.207	119	620		N.D.	
73) 14-DICHLOROENZENE	16.363	146	1295		N.D.	
74) 12-DICHLOROENZENE	17.155	146	985		N.D.	
75) N-BUTYLBENZENE	17.105	91	1722		N.D.	
76) 12-DIBR-3CLPROPANE	0.000		0		N.D.	
77) 124-TRICLBENZENE	20.703	180	3687		N.D.	
78) NAPHTHALENE	21.258	128	1763		N.D.	
79) HEXACHLOROBUTADIENE	21.023	225	1828		N.D.	
80) 123-TRICLBENZENE	21.787	182	901		N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
Data File : 063215.D  
Acq On : 14 Aug 2017 11:57 pm  
Operator : NIVA  
Sample : 2710174  
Misc : RUN190632  
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 15 13:56:38 2017  
Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
Quant Title : Analysis of VOC'S by 8260B,624  
QLast Update : Tue Aug 15 13:42:40 2017  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063216.D  
 Acq On : 15 Aug 2017 12:26 am  
 Operator : NIVA  
 Sample : 2710174DUP/2710170  
 Misc : RUN190632  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Aug 15 13:57:28 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.839	168	551479	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.810	114	1180825	20.00	µg/L	0.00
48) CHLOROBENZEN-d5-IS	11.564	117	1781654	20.00	µg/L	0.00
71) I14-DICLBENZENE-D4	16.308	152	1302403	20.00	µg/L	0.00

System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.853	111	338245	20.56	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery =	102.80%		
39) STOLUENE-D8	8.993	98	1474803	19.73	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery =	98.65%		
59) S4BRFLUOROBENZENE	13.896	95	998163	19.75	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery =	98.75%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) DICLDIFLUOROMETHANE	0.000		0		N.D.	
3) CHLOROMETHANE	2.130	50	2423		N.D.	
4) VINYL CHLORIDE	0.000		0		N.D.	
5) BROMOMETHANE	2.523	94	655		N.D.	
6) CHLOROETHANE	3.020	64	810		N.D.	
7) TRICLFLUOROMETHANE	2.833	101	28		N.D.	
8) ACROLEIN	3.332	56	128		N.D.	
9) ACETONE	0.000		0		N.D. d	
10) 11-DICHLOROETHENE	4.099	61	203		N.D.	
11) IODOMETHANE	3.541	142	2732		N.D.	
12) CARBON DISULFIDE	0.000		0		N.D. d	
13) ACRYLONITRILE	0.000		0		N.D.	
14) DICHLOROMETHANE	3.859	84	2265		N.D.	
15) TRANS12DICLETHENE	4.107	96	114		N.D.	
16) 11-DICHLOROETHANE	4.660	63	1432		N.D.	
17) VINYL ACETATE	4.640	43	55		N.D.	
18) 2-BUTANONE	0.000		0		N.D. d	
19) CIS12DICHLOROETHENE	5.254	96	150		N.D.	
20) 22-DICHLOROPROPANE	0.000		0		N.D.	
21) CHLOROFORM	5.647	83	960		N.D.	
22) BROMOCHLOROMETHANE	5.624	49	28		N.D.	
25) TETRAHYDROFURAN	5.641	42	1285		N.D.	
26) 111-TRICHLOROETHANE	0.000		0		N.D.	
27) 11-DICHLOROPROPENE	0.000		0		N.D. d	
28) 12-DICHLOROETHANE	0.000		0		N.D.	
29) CARBONTETRACHLORIDE	5.993	117	120		N.D.	
30) BENZENE	6.299	78	708		N.D.	
31) TRICHLOROETHENE	7.161	132	324		N.D.	
32) 12-DICHLOROPROPANE	7.292	63	26		N.D.	
33) DIBROMOMETHANE	7.727	174	36		N.D.	
34) BROMODICLMETHANE	0.000		0		N.D. d	
35) 2-CLETHYLVINYLEETHER	8.377	63	55		N.D.	
36) EPICHLOROHYDRIN	0.000		0		N.D.	
37) 4METHYL-2-PENTANONE	8.873	43	27		N.D.	
38) CIS13DICLPROPENE	8.631	75	31		N.D.	

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063216.D  
 Acq On : 15 Aug 2017 12:26 am  
 Operator : NIVA  
 Sample : 2710174DUP/2710170  
 Misc : RUN190632  
 ALS Vial : 26 Sample Multiplier: 1

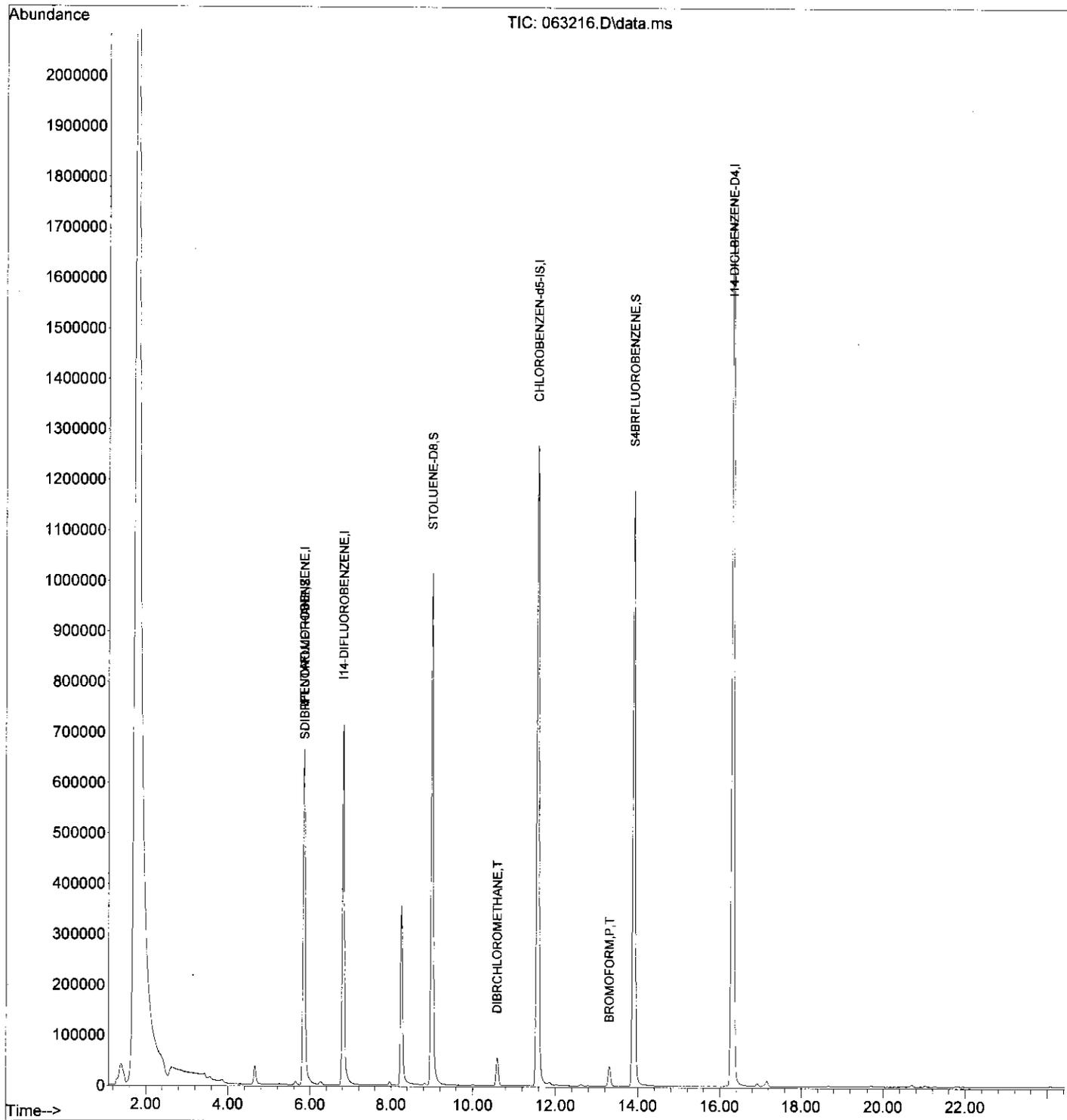
Quant Time: Aug 15 13:57:28 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
40) TOLUENE	9.099	91	1732	N.D.	
41) TRANS13DICLPROPENE	0.000		0	N.D.	
42) 112-TRICHLOROETHANE	0.000		0	N.D.	
43) 2-HEXANONE	0.000		0	N.D.	
44) 13-DICHLOROPROPANE	0.000		0	N.D.	
45) DIBRCHLOROMETHANE	10.585	129	68436	2.20 µg/L	94
46) TETRACHLOROETHENE	9.989	166	135	N.D.	
47) 12-DIBROMOETHANE	0.000		0	N.D.	
49) CHLOROBENZENE	11.609	112	65	N.D.	
50) 1-CHLOROHEXANE	11.545	91	1026	N.D.	
51) 1112-TETRACLETHANE	0.000		0	N.D.	
52) ETHYLBENZENE	11.799	91	1717	N.D.	
53) MP-XYLENE	12.019	91	1893	N.D.	
54) STYRENE	0.000		0	N.D.	
55) O-XYLENE	12.791	91	1582	N.D.	
56) BROMOFORM	13.304	173	46467	2.09 µg/L	99
57) 1122-TETRACLETHANE	0.000		0	N.D.	
58) ISOPROPYL BENZENE	13.519	105	102	N.D.	
60) 123-TRICLPROPANE	0.000		0	N.D.	
61) TRANS14DICL2BUTENE	0.000		0	N.D.	
62) BROMOBENZENE	14.149	77	138	N.D.	
63) N-PROPYLBENZENE	14.367	91	1737	N.D.	
64) 2-CHLOROTOLUENE	14.570	91	800	N.D.	
65) 4-CHLOROTOLUENE	14.785	91	906	N.D.	
66) 135TRIMETHYLBENZENE	14.727	105	112	N.D.	
67) TERT-BUTYLBENZENE	15.415	119	673	N.D.	
68) 124TRIMETHYLBENZENE	15.524	105	148	N.D.	
69) SEC-BUTYLBENZENE	15.876	105	477	N.D.	
70) 13-DICHLOROBENZENE	16.163	146	1112	N.D.	
72) 4-ISOPROPYLTOLUENE	16.196	119	1114	N.D.	
73) 14-DICHLOROBENZENE	16.364	146	1230	N.D.	
74) 12-DICHLOROBENZENE	17.147	146	533	N.D.	
75) N-BUTYLBENZENE	17.094	91	2855	N.D.	
76) 12-DIBR-3CLPROPANE	0.000		0	N.D.	
77) 124-TRICL BENZENE	20.689	180	2647	N.D.	
78) NAPHTHALENE	21.263	128	1155	N.D.	
79) HEXACHLOROBUTADIENE	21.018	225	1296	N.D.	
80) 123-TRICL BENZENE	21.802	182	880	N.D.	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063216.D  
 Acq On : 15 Aug 2017 12:26 am  
 Operator : NIVA  
 Sample : 2710174DUP/2710170  
 Misc : RUN190632  
 ALS Vial : 26 Sample Multiplier: 1

Quant Time: Aug 15 13:57:28 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063217.D  
 Acq On : 15 Aug 2017 12:57 am  
 Operator : NIVA  
 Sample : 2710174MS/2710171  
 Misc : RUN190632  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 15 13:58:11 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
-----						
Internal Standards						
1) IPENTAFLUOROBENZENE	5.831	168	537314	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.807	114	1147806	20.00	µg/L	0.00
48) CHLOROENZEN-d5-IS	11.564	117	1763342	20.00	µg/L	0.00
71) I14-DICLBNZENE-D4	16.305	152	1311462	20.00	µg/L	0.00
System Monitoring Compounds						
24) SDIBRFLUOROMETHANE	5.847	111	319773	19.99	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery = 99.95%			
39) STOLUENE-D8	8.990	98	1483886	20.42	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery = 102.10%			
59) S4BRFLUOROBENZENE	13.893	95	999007	19.98	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery = 99.90%			
Target Compounds						
						Qvalue
2) DICLDIFLUOROMETHANE	1.926	85	696225	23.87	µg/L	99
3) CHLOROMETHANE	2.127	50	905417	30.72	µg/L	98
4) VINYL CHLORIDE	2.231	62	454322	14.68	µg/L	99
5) BROMOMETHANE	2.518	94	156554	15.09	µg/L	97
6) CHLOROETHANE	2.615	64	301464	20.07	µg/L	98
7) TRICLFLUOROMETHANE	2.830	101	871645	27.76	µg/L	99
8) AROLEIN	3.310	56	1049605	305.89	µg/L	100
9) ACETONE	3.474	43	555394	106.92	µg/L	97
10) 11-DICHLOROETHENE	4.102	61	668866	23.43	µg/L	96
11) IODOMETHANE	3.541	142	167034	4.59	µg/L	96
12) CARBON DISULFIDE	3.561	76	5749857	123.47	µg/L	97
13) ACRYLONITRILE	4.174	53	1117772	111.97	µg/L	99
14) DICHLOROMETHANE	3.862	84	534094	19.19	µg/L	97
15) TRANS12DICLETHENE	4.107	96	523263	23.62	µg/L	97
16) 11-DICHLOROETHANE	4.581	63	943665	23.40	µg/L	98
17) VINYL ACETATE	4.634	43	1733	N.D.		
18) 2-BUTANONE	5.306	43	1155683	112.75	µg/L	97
19) CIS12DICHLOROETHENE	5.248	96	664857	22.92	µg/L	95
20) 22-DICHLOROPROPANE	5.209	77	588482	18.87	µg/L	98
21) CHLOROFORM	5.638	83	1093330	22.29	µg/L	99
22) BROMOCHLOROMETHANE	5.552	49	531280	22.99	µg/L	93
25) TETRAHYDROFURAN	5.619	42	154533	21.16	µg/L	96
26) 111-TRICHLOROETHANE	5.803	97	855497	23.09	µg/L	# 84
27) 11-DICHLOROPROPENE	6.001	75	719878	21.58	µg/L	98
28) 12-OICHLOROETHANE	6.377	62	784166	21.96	µg/L	99
29) CARBONTETRACHLORIDE	5.984	117	713509	23.48	µg/L	98
30) BENZENE	6.285	78	2378603	22.97	µg/L	98
31) TRICHLOROETHENE	7.150	132	684321	22.75	µg/L	98
32) 12-DICHLOROPROPANE	7.521	63	597583	21.55	µg/L	99
33) DIBROMOMETHANE	7.730	174	478907	21.99	µg/L	98
34) BROMODICLMEthane	7.958	83	806325	21.61	µg/L	99
35) 2-CLETHYLVINYLEETHER	8.399	63	94	N.D.		
36) EPICHLOROHYDRIN	8.569	57	874762	413.56	µg/L	99
37) 4METHYL-2-PENTANONE	8.884	43	2626366	109.70	µg/L	99
38) CI513DICLPROPENE	8.630	75	886654	20.71	µg/L	95

Quantitation Report (QT Reviewed)

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063217.D  
 Acq On : 15 Aug 2017 12:57 am  
 Operator : NIVA  
 Sample : 2710174MS/2710171  
 Misc : RUN190632  
 ALS Vial : 27 Sample Multiplier: 1

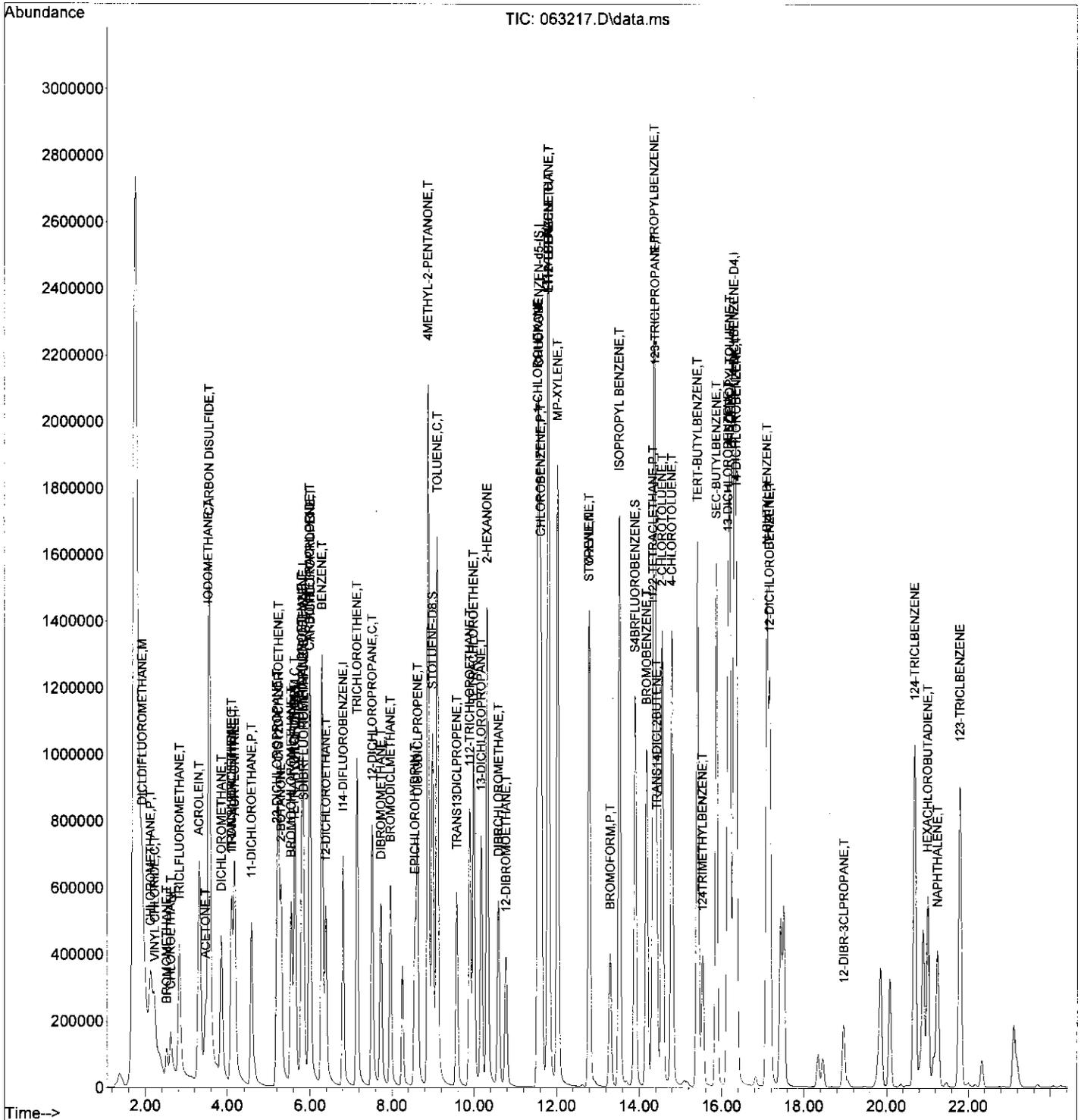
Quant Time: Aug 15 13:58:11 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.102	91	2640105	22.18	µg/L	100
41) TRANS13DICLPROPENE	9.579	75	710498	20.11	µg/L	98
42) 112-TRICHLOROETHANE	9.896	97	597497	21.46	µg/L	99
43) 2-HEXANONE	10.318	43	1815660	108.88	µg/L	98
44) 13-DICHLOROPROPANE	10.175	76	1039888	21.35	µg/L	97
45) DIBRCHLOROMETHANE	10.585	129	685674	22.66	µg/L	99
46) TETRACHLOROETHENE	9.991	166	705462	22.25	µg/L	99
47) 12-DIBROMOETHANE	10.767	107	606022	21.46	µg/L	100
49) CHLOROBENZENE	11.614	112	1783406	20.85	µg/L	97
50) 1-CHLOROHEXANE	11.542	91	757820	20.01	µg/L	96
51) 1112-TETRACLETHANE	11.798	133	596233	20.60	µg/L	97
52) ETHYLBENZENE	11.790	91	2938706	21.17	µg/L	99
53) MP-XYLENE	12.016	91	2519450	24.00	µg/L	99
54) STYRENE	12.788	104	48019	0.50	µg/L #	1
55) O-XYLENE	12.794	91	2051937	18.25	µg/L	99
56) BROMOFORM	13.307	173	471550	21.47	µg/L	99
57) 1122-TETRACLETHANE	14.333	83	812997	21.11	µg/L	100
58) ISOPROPYL BENZENE	13.522	105	2816651	21.26	µg/L	99
60) 123-TRICLPROPANE	14.386	110	251999	20.25	µg/L	95
61) TRANS14DICL2BUTENE	14.431	53	259321	33.56	µg/L	92
62) BROMOBENZENE	14.177	77	1154724	20.32	µg/L	97
63) N-PROPYLBENZENE	14.367	91	3186589	19.95	µg/L	99
64) 2-CHLOROTOLUENE	14.565	91	1977450	21.21	µg/L	99
65) 4-CHLOROTOLUENE	14.802	91	2043194	18.39	µg/L	99
66) 135TRIMETHYLBENZENE	14.473	105	857	N.D.		
67) TERT-BUTYLBENZENE	15.412	119	2040807	21.25	µg/L	97
68) 124TRIMETHYLBENZENE	15.532	105	522633	4.55	µg/L	99
69) SEC-BUTYLBENZENE	15.873	105	2789692	20.96	µg/L	99
70) 13-DICHLOROBENZENE	16.157	146	1428519	20.17	µg/L	99
72) 4-ISOPROPYLTOLUENE	16.199	119	2149177	17.88	µg/L	100
73) 14-DICHLOROBENZENE	16.355	146	1439874	19.84	µg/L	97
74) 12-DICHLOROBENZENE	17.161	146	1415273	20.17	µg/L	100
75) N-BUTYLBENZENE	17.097	91	2043065	19.49	µg/L	99
76) 12-DIBR-3CLPROPANE	18.965	157	154786	19.97	µg/L	99
77) 124-TRICL BENZENE	20.691	180	976039	19.88	µg/L	98
78) NAPHTHALENE	21.252	128	995213	9.30	µg/L	100
79) HEXACHLOROBUTADIENE	21.015	225	334511	19.40	µg/L	99
80) 123-TRICL BENZENE	21.793	182	848514	19.61	µg/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063217.D  
 Acq On : 15 Aug 2017 12:57 am  
 Operator : NIVA  
 Sample : 2710174MS/2710171  
 Misc : RUN190632  
 ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 15 13:58:11 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063218.D  
 Acq On : 15 Aug 2017 01:29 am  
 Operator : NIVA  
 Sample : 2710174MSD/2710172  
 Misc : RUN190632  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 15 13:59:21 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
<b>Internal Standards</b>						
1) IPENTAFLUOROBENZENE	5.831	168	540931	20.00	µg/L	# 0.00
23) I14-DIFLUOROBENZENE	6.807	114	1164504	20.00	µg/L	0.00
48) CHLOROENZEN-d5-IS	11.561	117	1780203	20.00	µg/L	0.00
71) I14-DICLBNZENE-D4	16.305	152	1332498	20.00	µg/L	0.00
<b>System Monitoring Compounds</b>						
24) SDIBRFLUOROMETHANE	5.845	111	323677	19.95	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	99.75%	
39) STOLUENE-D8	8.990	98	1500481	20.36	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	101.80%	
59) S4BRFLUOROBENZENE	13.893	95	1012832	20.06	µg/L	0.00
Spiked Amount	20.000	Range 80 - 120	Recovery	=	100.30%	
<b>Target Compounds</b>						
2) DICLDIFLUOROMETHANE	1.915	85	714766	24.35	µg/L	97
3) CHLOROMETHANE	2.122	50	893198	30.11	µg/L	100
4) VINYL CHLORIDE	2.226	62	356109	11.43	µg/L	99
5) BROMOMETHANE	2.518	94	157564	15.09	µg/L	97
6) CHLOROETHANE	2.607	64	298348	19.73	µg/L	98
7) TRICLFLUOROMETHANE	2.825	101	886719	28.05	µg/L	99
8) ACRROLEIN	3.304	56	600239	173.76	µg/L	100
9) ACETONE	3.472	43	550082	105.19	µg/L	96
10) 11-DICHLOROETHENE	4.102	61	652400	22.70	µg/L	98
11) IODOMETHANE	3.536	142	171503	4.68	µg/L	97
12) CARBON DISULFIDE	3.555	76	5698719	121.55	µg/L	98
13) ACRYLONITRILE	4.174	53	1115223	110.97	µg/L	99
14) DICHLOROMETHANE	3.856	84	515354	18.39	µg/L	97
15) TRANS12DICLETHENE	4.099	96	525536	23.57	µg/L	98
16) 11-DICHLOROETHANE	4.579	63	912163	22.47	µg/L	99
17) VINYL ACETATE	4.643	43	467	N.D.		
18) 2-BUTANONE	5.304	43	1156039	112.03	µg/L	97
19) CI512DICHLOROETHENE	5.242	96	666114	22.81	µg/L	97
20) 22-DICHLOROPROPANE	5.206	77	571487	18.20	µg/L	98
21) CHLOROFORM	5.633	83	1059930	21.46	µg/L	100
22) BROMOCHLOROMETHANE	5.549	49	518718	22.30	µg/L	93
25) TETRAHYDROFURAN	5.616	42	158418	21.39	µg/L	96
26) 111-TRICHLOROETHANE	5.800	97	844340	22.46	µg/L	# 83
27) 11-DICHLOROPROPENE	5.995	75	552705	16.33	µg/L	99
28) 12-DICHLOROETHANE	6.372	62	761820	21.03	µg/L	99
29) CARBONTETRACHLORIDE	5.981	117	723509	23.47	µg/L	98
30) BENZENE	6.283	78	2325662	22.14	µg/L	98
31) TRICHLOROETHENE	7.153	132	657617	21.55	µg/L	99
32) 12-DICHLOROPROPANE	7.518	63	589530	20.96	µg/L	98
33) DIBROMOMETHANE	7.733	174	466679	21.12	µg/L	97
34) BROMODICL METHANE	7.959	83	795482	21.02	µg/L	100
35) 2-CLETHYL VINYLETHER	8.405	63	338	N.D.		
36) EPICHLOROHYDRIN	8.569	57	872549	406.60	µg/L	99
37) 4METHYL-2-PENTANONE	8.882	43	2622246	107.95	µg/L	99
38) CI513DICLPROPENE	8.625	75	824042	18.97	µg/L	96

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063218.D  
 Acq On : 15 Aug 2017 01:29 am  
 Operator : NIVA  
 Sample : 2710174MSD/2710172  
 Misc : RUN190632  
 ALS Vial : 28 Sample Multiplier: 1

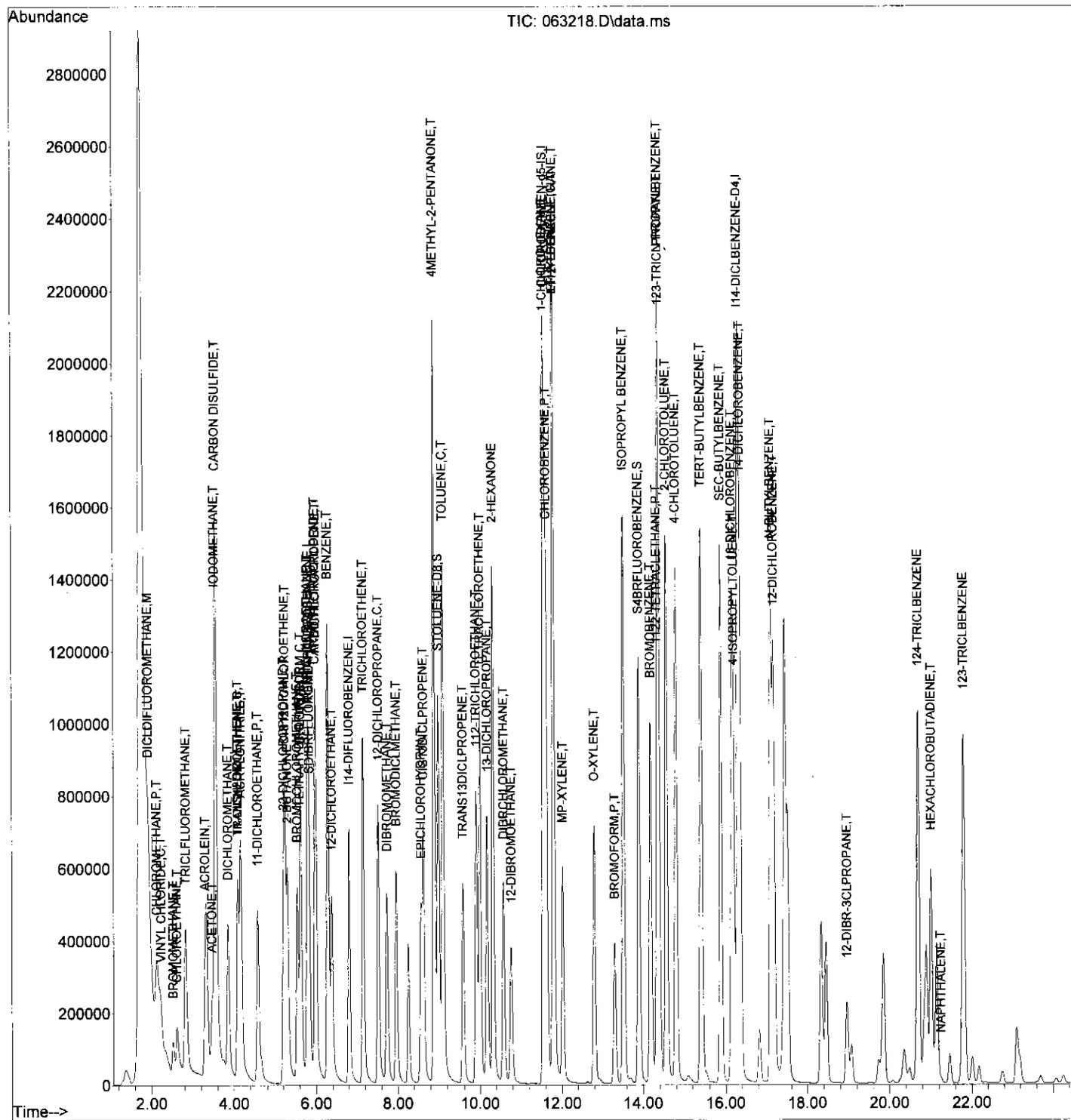
Quant Time: Aug 15 13:59:21 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.096	91	2281137	18.89	µg/L	100
41) TRANS13DICLPROPENE	9.573	75	666290	18.59	µg/L	97
42) 112-TRICHLOROETHANE	9.899	97	584584	20.69	µg/L	99
43) 2-HEXANONE	10.318	43	1809172	106.93	µg/L	98
44) 13-DICHLOROPROPANE	10.178	76	1022707	20.70	µg/L	97
45) DIBRCHLOROMETHANE	10.585	129	673324	21.94	µg/L	99
46) TETRACHLOROETHENE	9.994	166	702237	21.84	µg/L	99
47) 12-DIBROMOETHANE	10.764	107	592021	20.66	µg/L	100
49) CHLOROENZENE	11.617	112	1740753	20.16	µg/L	97
50) 1-CHLOROHEXANE	11.545	91	780735	20.42	µg/L	95
51) 1112-TETRACLETHANE	11.796	133	581405	19.89	µg/L	98
52) ETHYLBENZENE	11.787	91	2609427	18.62	µg/L	100
53) MP-XYLENE	12.016	91	802706	7.57	µg/L	99
54) STYRENE	12.892	104	582	N.D.		
55) O-XYLENE	12.794	91	1021853	9.00	µg/L	99
56) BROMOFORM	13.304	173	460680	20.78	µg/L	97
57) 1122-TETRACLETHANE	14.328	83	795062	20.45	µg/L	100
58) ISOPROPYL BENZENE	13.522	105	2601682	19.45	µg/L	100
60) 123-TRICLPROPANE	14.378	110	248698	19.80	µg/L	95
61) TRANS14DICL2BUTENE	14.451	53	360	N.D.		
62) BROMOBENZENE	14.177	77	1135892	19.80	µg/L	97
63) N-PROPYLBENZENE	14.370	91	2849244	17.67	µg/L	100
64) 2-CHLOROTOLUENE	14.562	91	2188514	23.25	µg/L	99
65) 4-CHLOROTOLUENE	14.799	91	2155188	19.21	µg/L	99
66) 135TRIMETHYLBENZENE	14.755	105	746	N.D.		
67) TERT-BUTYLBENZENE	15.413	119	1932132	19.93	µg/L	98
68) 124TRIMETHYLBENZENE	15.521	105	2257	N.D.		
69) SEC-BUTYLBENZENE	15.876	105	2603884	19.38	µg/L	99
70) 13-DICHLOROENZENE	16.152	146	1424066	19.92	µg/L	99
72) 4-ISOPROPYLTOLUENE	16.202	119	1082585	8.86	µg/L	99
73) 14-DICHLOROENZENE	16.358	146	1433068	19.43	µg/L	97
74) 12-DICHLOROENZENE	17.164	146	1397618	19.61	µg/L	100
75) N-BUTYLBENZENE	17.094	91	1879017	17.64	µg/L	98
76) 12-DIBR-3CLPROPANE	18.957	157	158598	20.13	µg/L	99
77) 124-TRICL BENZENE	20.694	180	991308	19.87	µg/L	99
78) NAPHTHALENE	21.252	128	32607	0.30	µg/L	97
79) HEXACHLOROBUTADIENE	21.021	225	350586	20.01	µg/L	98
80) 123-TRICL BENZENE	21.793	182	868533	19.76	µg/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063218.D  
 Acq On : 15 Aug 2017 01:29 am  
 Operator : NIVA  
 Sample : 2710174MSD/2710172  
 Misc : RUN190632  
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 15 13:59:21 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063219.D  
 Acq On : 15 Aug 2017 02:00 am  
 Operator : NIVA  
 Sample : LFB/2712789  
 Misc : RUN190632  
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 15 14:00:33 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
-----							
Internal Standards							
1) IPENTAFLUOROBENZENE	5.830	168	534525	20.00	µg/L	#	0.00
23) I14-DIFLUOROBENZENE	6.804	114	1163691	20.00	µg/L		0.00
48) CHLOROBENZEN-d5-IS	11.564	117	1789174	20.00	µg/L		0.00
71) I14-DICLBENZENE-D4	16.310	152	1330555	20.00	µg/L		0.00
System Monitoring Compounds							
24) SDIBRFLUOROMETHANE	5.842	111	324384	20.00	µg/L		0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=		100.00%
39) STOLUENE-D8	8.990	98	1499853	20.36	µg/L		0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=		101.80%
59) S4BRFLUOROBENZENE	13.895	95	1019948	20.10	µg/L		0.00
Spiked Amount	20.000	Range	80 - 120	Recovery	=		100.50%
Target Compounds							
						Qvalue	
2) DICLDIFLUOROMETHANE	1.915	85	642026	22.13	µg/L		97
3) CHLOROMETHANE	2.119	50	656464	22.39	µg/L		99
4) VINYL CHLORIDE	2.225	62	680764	22.11	µg/L		100
5) BROMOMETHANE	2.504	94	210486	20.40	µg/L		97
6) CHLOROMETHANE	2.604	64	267726	17.92	µg/L		97
7) TRICLFLUOROMETHANE	2.822	101	796887	25.51	µg/L		100
8) ACROLEIN	3.301	56	1707386	500.18	µg/L		100
9) ACETONE	3.466	43	549092	106.26	µg/L		99
10) 11-DICHLOROETHENE	4.102	61	578798	20.38	µg/L		97
11) IODOMETHANE	3.513	142	3582030	99.02	µg/L		100
12) CARBON DISULFIDE	3.555	76	4745086	102.43	µg/L		97
13) ACRYLONITRILE	4.174	53	1128221	113.61	µg/L		99
14) DICHLOROMETHANE	3.856	84	602015	21.74	µg/L		97
15) TRANS12DICLETHENE	4.102	96	458731	20.82	µg/L		98
16) 11-DICHLOROETHANE	4.578	63	840912	20.96	µg/L		99
17) VINYL ACETATE	4.626	43	3185229	93.10	µg/L		99
18) 2-BUTANONE	5.309	43	1174414	115.17	µg/L		98
19) CIS12DICHLOROETHENE	5.245	96	609333	21.11	µg/L		98
20) 22-DICHLOROPROPANE	5.203	77	458602	14.78	µg/L		97
21) CHLOROFORM	5.638	83	1003311	20.56	µg/L		100
22) BROMOCHLOROMETHANE	5.546	49	494002	21.49	µg/L		93
25) TETRAHYDROFURAN	5.613	42	155985	21.07	µg/L		95
26) 111-TRICHLOROETHANE	5.797	97	757395	20.16	µg/L	#	83
27) 11-DICHLOROPROPENE	6.001	75	679502	20.09	µg/L		98
28) 12-DICHLOROETHANE	6.374	62	735192	20.31	µg/L		100
29) CARBONTETRACHLORIDE	5.978	117	633462	20.56	µg/L		99
30) BENZENE	6.282	78	2134454	20.33	µg/L		98
31) TRICHLOROETHENE	7.150	132	628420	20.61	µg/L		99
32) 12-DICHLOROPROPANE	7.518	63	561715	19.98	µg/L		99
33) DIBROMOMETHANE	7.730	174	454896	20.61	µg/L		98
34) BROMODICLMEthane	7.958	83	756431	20.00	µg/L		100
35) 2-CLETHYLVINYLETHER	8.404	63	2090303	108.38	µg/L		96
36) EPICHLOROHYDRIN	8.569	57	1104941	515.25	µg/L		99
37) 4METHYL-2-PENTANONE	8.884	43	2719029	112.02	µg/L		99
38) CIS13DICLPROPENE	8.628	75	842745	19.42	µg/L		97

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063219.D  
 Acq On : 15 Aug 2017 02:00 am  
 Operator : NIVA  
 Sample : LFB/2712789  
 Misc : RUN190632  
 ALS Vial : 29 Sample Multiplier: 1

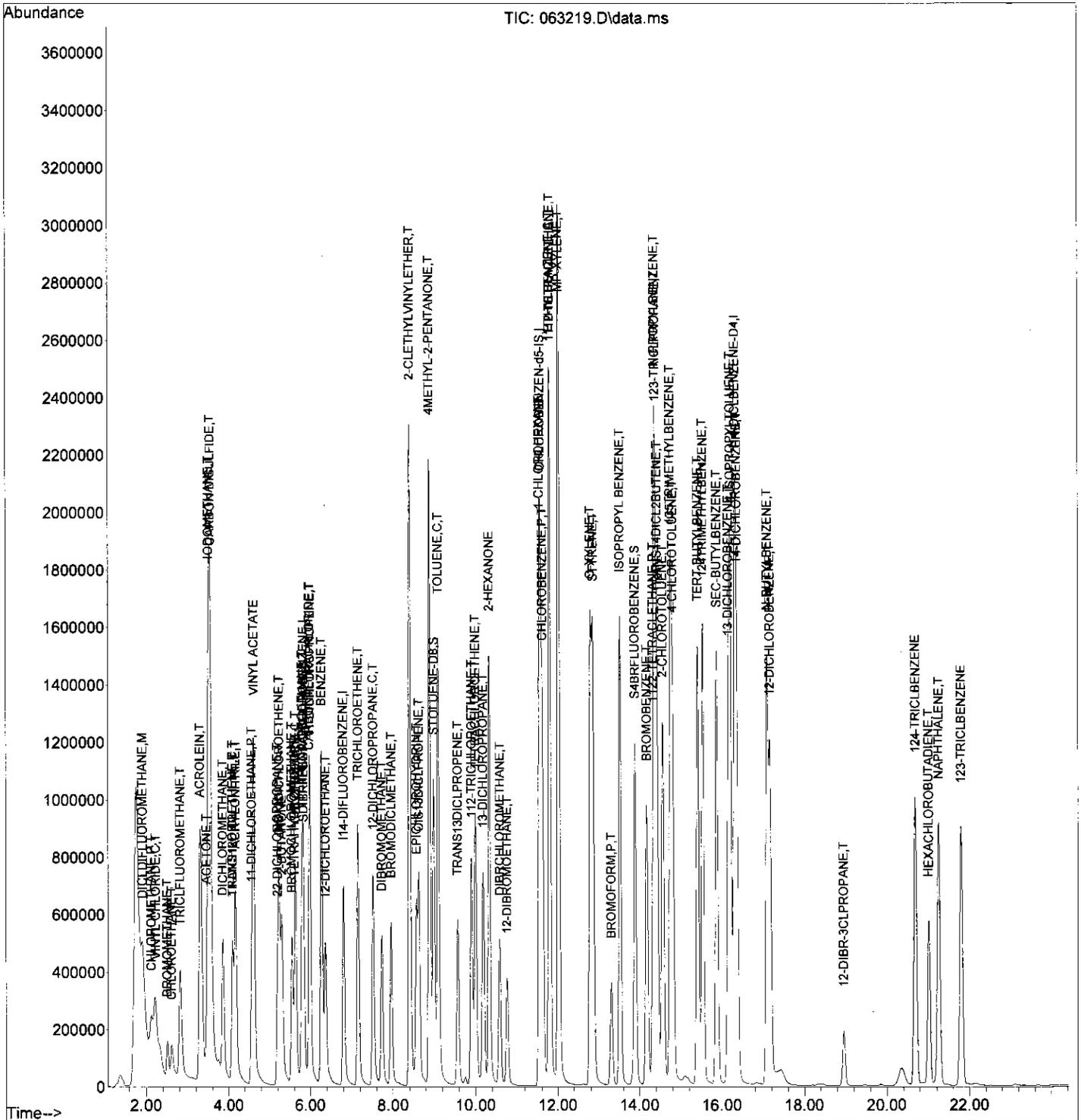
Quant Time: Aug 15 14:00:33 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
40) TOLUENE	9.099	91	2490050	20.63	µg/L	99
41) TRANS13DICLPROPENE	9.573	75	689255	19.24	µg/L	98
42) 112-TRICHLOROETHANE	9.902	97	581313	20.59	µg/L	98
43) 2-HEXANONE	10.320	43	1891949	111.91	µg/L	98
44) 13-DICHLOROPROPANE	10.175	76	1021679	20.69	µg/L	97
45) DIBRCHLOROMETHANE	10.585	129	616816	20.11	µg/L	100
46) TETRACHLOROETHENE	9.994	166	651523	20.27	µg/L	98
47) 12-DIBROMOETHANE	10.766	107	592602	20.69	µg/L	100
49) CHLOROBENZENE	11.617	112	1658010	19.11	µg/L	97
50) 1-CHLOROHEXANE	11.542	91	717489	18.68	µg/L	96
51) 1112-TETRACLETHANE	11.795	133	557826	18.99	µg/L	98
52) ETHYLBENZENE	11.787	91	2760508	19.60	µg/L	99
53) MP-XYLENE	12.013	91	4234936	39.75	µg/L	100
54) STYRENE	12.855	104	1888143	19.52	µg/L	89
55) O-XYLENE	12.794	91	2215687	19.42	µg/L	92
56) BROMOFORM	13.307	173	423397	19.00	µg/L	98
57) 1122-TETRACLETHANE	14.330	83	773325	19.79	µg/L	99
58) ISOPROPYL BENZENE	13.522	105	2681666	19.95	µg/L	100
60) 123-TRICLPROPANE	14.383	110	255045	20.20	µg/L	93
61) TRANS14DICL2BUTENE	14.431	53	710165	90.58	µg/L	96
62) BROMOBENZENE	14.180	77	1107936	19.22	µg/L	97
63) N-PROPYLBENZENE	14.367	91	3191031	19.69	µg/L	98
64) 2-CHLOROTOLUENE	14.565	91	1817424	19.21	µg/L	98
65) 4-CHLOROTOLUENE	14.799	91	2171810	19.26	µg/L	99
66) 135TRIMETHYLBENZENE	14.743	105	2344799	19.66	µg/L	98
67) TERT-BUTYLBENZENE	15.412	119	1925869	19.76	µg/L	97
68) 124TRIMETHYLBENZENE	15.535	105	2265021	19.43	µg/L	99
69) SEC-BUTYLBENZENE	15.878	105	2677707	19.83	µg/L	99
70) 13-DICHLOROBENZENE	16.151	146	1368523	19.05	µg/L	99
72) 4-ISOPROPYLTOLUENE	16.202	119	2378301	19.50	µg/L	99
73) 14-DICHLOROBENZENE	16.352	146	1383911	18.79	µg/L	97
74) 12-DICHLOROBENZENE	17.161	146	1361500	19.13	µg/L	100
75) N-BUTYLBENZENE	17.094	91	2035600	19.14	µg/L	97
76) 12-DIBR-3CLPROPANE	18.957	157	161473	20.53	µg/L	99
77) 124-TRICLBENZENE	20.691	180	961780	19.31	µg/L	99
78) NAPHTHALENE	21.249	128	2240237	20.63	µg/L	100
79) HEXACHLOROBUTADIENE	21.015	225	339717	19.42	µg/L	98
80) 123-TRICLBENZENE	21.787	182	862887	19.66	µg/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\MassHunter\GCMS\1\data\190632CC\  
 Data File : 063219.D  
 Acq On : 15 Aug 2017 02:00 am  
 Operator : NIVA  
 Sample : LFB/2712789  
 Misc : RUN190632  
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 15 14:00:33 2017  
 Quant Method : D:\MassHunter\GCMS\1\methods\8260VOC-AGO-LIQ-17.M  
 Quant Title : Analysis of VOC'S by 8260B,624  
 QLast Update : Tue Aug 15 13:42:40 2017  
 Response via : Initial Calibration



**APPENDIX C**  
**PROFICIENCY TEST (PT)**



A Waters Company

Janet Gomez  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
USA

**WP-264**  **Final Report**

The section header includes the study ID "WP-264" in a bold, italicized green font. To its right is the WatR logo, which consists of a circular emblem with a stylized green figure inside, set against a white background. Below the logo is a small "TM" trademark symbol.

**WatR™ Pollution Proficiency Testing**

**WatR™ Pollution Study**

**Open Date: 01/16/17**

**Close Date: 03/02/17**

**Report Issued Date: 03/06/17**



March 6, 2017

Janet Gomez  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910

Enclosed is your final report for ERA's WP-264 WatR™ Pollution Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WP-264 WatR™ Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the current TNI Fields of Proficiency Testing (FoPT) tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the current TNI FoPT tables. If the analyte is not included in the TNI FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 730002268).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have many years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be useful in helping you work through your technical issues.

At the request of the TNI Accreditation Council, we have included a Laboratory Exception Report that includes a list of all analytes reported with less than qualifiers when the assigned value was greater than "0." In addition, because we have received many requests from laboratories, this report also includes a list of all analytes with "Not Acceptable" evaluations.

Some states have elected not to convert to the 2009 TNI Standards at this time. If you have released your results to a state that has retained the 2003 NELAC Evaluation Criteria, your final report will include a section that evaluates the results according to the 2003 Standard in addition to the 2009 TNI Standards.

Thank you for your participation in ERA's WP-264 WatR™ Pollution Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

Patrick Larson  
Quality Officer

attachments



A Waters Company

<b>Report Recipient</b>	<b>Contact/Phone Number</b>	<b>Reporting Type</b>	<b>Evaluation Type</b>
A2LA	Atefeh Fathi / 301-644-3200	All Analytes	2009 TNI
Florida	Vanessa Soto / 904-791-1599	All Analytes	2009 TNI



# WP-264 Definitions & Study Discussion

**Study Dates: 01/16/17 - 03/02/17**

**Report Issued: 03/06/17**

## WP Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current TNI Fields of Proficiency Testing (FoPT) tables. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2009 TNI Standards. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current USEPA/NELAC FoPT tables, or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = No Value reported.

The Method Description is the method the laboratory reported to ERA.

## WP Study Discussion

ERA's WP-264 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) tables.

ERA's WP-264 WatR™Pollution study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2009 TNI PT Standard and the criteria contained in the most current TNI FoPT tables.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WP-264 WatR™Pollution study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™Pollution Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





A Waters Company

# WP-264 Laboratory Exception Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
E359301  
03/06/17  
01/16/17 - 03/02/17

## 2009 TNI Evaluation Checks

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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**WP Volatiles (cat# 830, lot# P264-710)**

4315	Acetone	µg/L	< 6.00	22.6	4.61 - 42.6	Acceptable	EPA 8260B 2 1996
4315	Acetone	µg/L	< 6.00	22.6	4.61 - 42.6	Acceptable	EPA 8260C 2006
4315	Acetone	µg/L	< 6.00	22.6	4.61 - 42.6	Acceptable	EPA 624 Appendix A 1982
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 8260B 2 1996
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 8260C 2006
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 624 Appendix A 1982



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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## 2009 TNI Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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**WP Minerals (cat# 581, lot# P264-506)**

1610	Conductivity at 25°C	µmhos/cm	455	508	457 - 559	Not Acceptable	SM 2510 B-2011 2011
1610	Conductivity at 25°C	µmhos/cm	455	508	457 - 559	Not Acceptable	EPA 120.1 1982

**WP Volatiles (cat# 830, lot# P264-710)**

4640	1,1-Dichloroethylene	µg/L	47.2	30.8	18.0 - 45.1	Not Acceptable	EPA 8260B 2 1996
4640	1,1-Dichloroethylene	µg/L	47.2	30.8	18.0 - 45.1	Not Acceptable	EPA 8260C 2006
4640	1,1-Dichloroethylene	µg/L	47.2	30.8	18.0 - 45.1	Not Acceptable	EPA 624 Appendix A 1982
4700	trans-1,2-Dichloroethylene	µg/L	31.6	22.3	13.4 - 31.2	Not Acceptable	EPA 8260B 2 1996
4700	trans-1,2-Dichloroethylene	µg/L	31.6	22.3	13.4 - 31.2	Not Acceptable	EPA 8260C 2006
4700	trans-1,2-Dichloroethylene	µg/L	31.6	22.3	13.4 - 31.2	Not Acceptable	EPA 624 Appendix A 1982
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 8260B 2 1996
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 8260C 2006
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 624 Appendix A 1982



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Study # : WP-264





# Final Report Results For Laboratory Environmental Quality Lab





## 2009 TNI Evaluation Report

Study: **WP-264**

ERA Customer Number: **E359301**

Laboratory Name: **Environmental Quality  
Lab**

### Inorganic Results





A Waters Company

# WP-264 2009 TNI Evaluation Final Complete Report

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TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Minerals (cat# 581, lot# P264-506)**

1505	Alkalinity as CaCO3	mg/L	86.3	85.4	72.6 - 98.2	Acceptable	EPA 310.2 1974	2/16/2017	0.759	84.1	2.94	S. Piñero
1575	Chloride	mg/L	80.5	82.9	72.5 - 93.5	Acceptable	SM 4500-Cl E-2011 2011	2/16/2017	-0.0678	80.7	3.17	S. Piñero
1610	Conductivity at 25°C	µmhos/cm	455	508	457 - 559	Not Acceptable	SM 2510 B-2011 2011	2/15/2017	-3.86	505	13.0	S. Vázquez
1730	Fluoride	mg/L	1.54	1.59	1.25 - 1.88	Acceptable	SM 4500-F C-2011 2011	2/15/2017	0.0350	1.54	0.0907	C. Rivera
1125	Potassium	mg/L	22.9	27.8	22.2 - 33.4	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-3.01	27.0	1.36	Y. Cardona
1155	Sodium	mg/L	86.2	92.9	74.3 - 111	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.752	89.8	4.81	Y. Cardona
2000	Sulfate	mg/L	25.2	30.1	24.3 - 34.8	Acceptable	ASTM D516-02 2002	2/23/2017	-2.32	28.9	1.61	D. Silva
1955	Total Dissolved Solids at 180°C	mg/L	362	381	336 - 426	Acceptable	SM 2540 C-2011 2011	2/23/2017	-0.410	369	17.7	M. Gil
1950	Total Solids at 105°C	mg/L	373	395	350 - 440	Acceptable	SM 2540 B-2011 2011	2/23/2017	-0.489	381	16.3	M. Gil

**WP Minerals (cat# 581, lot# P264-506)**

1505	Alkalinity as CaCO3	mg/L		85.4	72.6 - 98.2	Not Reported				84.1	2.94	
1575	Chloride	mg/L		82.9	72.5 - 93.5	Not Reported				80.7	3.17	
1610	Conductivity at 25°C	µmhos/cm	455	508	457 - 559	Not Acceptable	EPA 120.1 1982	3/15/2017	-3.86	505	13.0	S. Vázquez
1730	Fluoride	mg/L		1.59	1.25 - 1.88	Not Reported				1.54	0.0907	
1125	Potassium	mg/L		27.8	22.2 - 33.4	Not Reported				27.0	1.36	
1155	Sodium	mg/L		92.9	74.3 - 111	Not Reported				89.8	4.81	
2000	Sulfate	mg/L		30.1	24.3 - 34.8	Not Reported				28.9	1.61	
1955	Total Dissolved Solids at 180°C	mg/L		381	336 - 426	Not Reported				369	17.7	
1950	Total Solids at 105°C	mg/L		395	350 - 440	Not Reported				381	16.3	

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**WP Minerals (cat# 581, lot# P264-506)**

1505	Alkalinity as CaCO3	mg/L		85.4	72.6 - 98.2	Not Reported				84.1	2.94	
1575	Chloride	mg/L		82.9	72.5 - 93.5	Not Reported				80.7	3.17	
1610	Conductivity at 25°C	µmhos/cm		508	457 - 559	Not Reported				505	13.0	
1730	Fluoride	mg/L		1.59	1.25 - 1.88	Not Reported				1.54	0.0907	
1125	Potassium	mg/L	22.9	27.8	22.2 - 33.4	Acceptable	EPA 6010B 2 1996	3/24/2017	-3.01	27.0	1.36	Y. Cardona
1155	Sodium	mg/L	86.2	92.9	74.3 - 111	Acceptable	EPA 6010B 2 1996	3/24/2017	-0.752	89.8	4.81	Y. Cardona
2000	Sulfate	mg/L		30.1	24.3 - 34.8	Not Reported				28.9	1.61	
1955	Total Dissolved Solids at 180°C	mg/L		381	336 - 426	Not Reported				369	17.7	
1950	Total Solids at 105°C	mg/L		395	350 - 440	Not Reported				381	16.3	

**WP Minerals (cat# 581, lot# P264-506)**

1505	Alkalinity as CaCO3	mg/L		85.4	72.6 - 98.2	Not Reported				84.1	2.94	
1575	Chloride	mg/L		82.9	72.5 - 93.5	Not Reported				80.7	3.17	
1610	Conductivity at 25°C	µmhos/cm		508	457 - 559	Not Reported				505	13.0	
1730	Fluoride	mg/L		1.59	1.25 - 1.88	Not Reported				1.54	0.0907	
1125	Potassium	mg/L	22.9	27.8	22.2 - 33.4	Acceptable	EPA 6010C 2000	3/24/2017	-3.01	27.0	1.36	Y. Cardona
1155	Sodium	mg/L	86.2	92.9	74.3 - 111	Acceptable	EPA 6010C 2000	3/24/2017	-0.752	89.8	4.81	Y. Cardona
2000	Sulfate	mg/L		30.1	24.3 - 34.8	Not Reported				28.9	1.61	
1955	Total Dissolved Solids at 180°C	mg/L		381	336 - 426	Not Reported				369	17.7	
1950	Total Solids at 105°C	mg/L		395	350 - 440	Not Reported				381	16.3	



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**WP Hardness (cat# 580, lot# P264-507)**

1960	Total Suspended Solids	mg/L	68.7	71.4	57.7 - 80.0	Acceptable	SM 2540 D-2011 2011	2/24/2017	-0.166	69.1	2.57	M. Gil
1035	Calcium	mg/L	90.4	88.8	75.5 - 102	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.682	87.7	3.96	Y. Cardona
1085	Magnesium	mg/L	15.4	15.9	13.5 - 18.3	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.341	15.6	0.720	Y. Cardona
1550	Calcium Hardness as CaCO3	mg/L	226	222	189 - 255	Acceptable	SM 2340 B-2011 2011	2/28/2017	0.845	218	9.36	Y. Cardona
1755	Total Hardness as CaCO3	mg/L	289	287	244 - 330	Acceptable	SM 2340 B-2011 2011	2/28/2017	0.641	282	11.0	Y. Cardona

**WP Hardness (cat# 580, lot# P264-507)**

1960	Total Suspended Solids	mg/L		71.4	57.7 - 80.0	Not Reported				69.1	2.57	
1035	Calcium	mg/L	90.4	88.8	75.5 - 102	Acceptable	EPA 6010B 2 1996	3/24/2017	0.682	87.7	3.96	Y. Cardona
1085	Magnesium	mg/L	15.4	15.9	13.5 - 18.3	Acceptable	EPA 6010B 2 1996	3/24/2017	-0.341	15.6	0.720	Y. Cardona
1550	Calcium Hardness as CaCO3	mg/L		222	189 - 255	Not Reported				218	9.36	
1755	Total Hardness as CaCO3	mg/L		287	244 - 330	Not Reported				282	11.0	

**WP Hardness (cat# 580, lot# P264-507)**

1960	Total Suspended Solids	mg/L		71.4	57.7 - 80.0	Not Reported				69.1	2.57	
1035	Calcium	mg/L	90.4	88.8	75.5 - 102	Acceptable	EPA 6010C 2000	3/24/2017	0.682	87.7	3.96	Y. Cardona
1085	Magnesium	mg/L	15.4	15.9	13.5 - 18.3	Acceptable	EPA 6010C 2000	3/24/2017	-0.341	15.6	0.720	Y. Cardona
1550	Calcium Hardness as CaCO3	mg/L		222	189 - 255	Not Reported				218	9.36	
1755	Total Hardness as CaCO3	mg/L		287	244 - 330	Not Reported				282	11.0	

**WP pH (cat# 577, lot# P264-977)**

1900	pH	S.U.	9.61	9.65	9.45 - 9.85	Acceptable	SM 4500-H+ B-2011 2011	2/27/2017	0.200	9.59	0.0920	G. Valls
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**WP pH (cat# 577, lot# P264-977)**

1900	pH	S.U.	9.61	9.65	9.45 - 9.85	Acceptable	EPA 150.1 1982	2/27/2017	0.200	9.59	0.0920	G. Valls
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**WP pH (cat# 577, lot# P264-977)**

1900	pH	S.U.	9.61	9.65	9.45 - 9.85	Acceptable	EPA 9040 1986	2/27/2017	0.200	9.59	0.0920	G. Valls
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**WP Simple Nutrients (cat# 584, lot# P264-505)**

1515	Ammonia as N	mg/L	4.93	4.14	3.17 - 5.16	Acceptable	SM 4500-NH3 D-2011 2011	2/22/2017	2.91	4.14	0.273	L. Hernández
1820	Nitrate + Nitrite as N	mg/L	15.5	15.2	12.7 - 17.6	Acceptable	EPA 353.2 2 1993	2/24/2017	0.190	15.4	0.729	S. Piñero
1810	Nitrate as N	mg/L	15.5	15.2	12.7 - 17.7	Acceptable	EPA 353.2 2 1993	2/24/2017	0.226	15.3	0.695	S. Piñero
1870	ortho-Phosphate as P	mg/L	4.53	4.69	3.99 - 5.39	Acceptable	SM 4500-P E-2011 2011	2/22/2017	-0.842	4.73	0.233	C. Rivera

**WP Complex Nutrients (cat# 579, lot# P264-525)**

1795	Total Kjeldahl Nitrogen	mg/L	12.0	13.0	9.62 - 16.1	Acceptable	EPA 351.2 2 1993	2/23/2017	-0.831	12.7	0.903	L. Hernández
1910	Total phosphorus as P	mg/L	9.38	9.35	7.80 - 10.8	Acceptable	SM 4500-P E-2011 2011	2/23/2017	-0.0627	9.41	0.461	C. Rivera

**WP Nitrite (cat# 888, lot# P264-770)**

1840	Nitrite as N	mg/L	2.95	2.98	2.57 - 3.39	Acceptable	EPA 353.2 2 1993	2/24/2017	-0.323	3.01	0.170	S. Piñero
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**WP Demand (cat# 578, lot# P264-516)**

1530	BOD	mg/L	79.4	75.6	40.1 - 111	Acceptable	SM 5210 B-2011 2011	2/22/2017	0.406	74.9	11.1	Y. Vega
1555	CBOD	mg/L	56.4	68.4	31.2 - 106	Acceptable	SM 5210 B-2011 2011	2/22/2017	-1.11	71.0	13.1	Y. Vega
1565	COD	mg/L	130	123	95.8 - 146	Acceptable	EPA 410.4 2 1993	2/27/2017	1.21	121	7.29	Y. Vega
2040	TOC	mg/L	50.5	48.6	40.5 - 56.4	Acceptable	SM5310C online	2/22/2017	0.768	48.6	2.48	C. Rivera

**WP Oil & Grease (cat# 582, lot# P264-518)**

1803	n-Hexane Extractable Material(O&G)(Grav)	mg/L	24.6	37.5	22.5 - 47.2	Acceptable	EPA 1664A 1999	2/22/2017	-3.74	35.2	2.85	D. Silva
1803	n-Hexane Extractable Material(O&G)(IR)	mg/L		46.1	29.1 - 56.7	Not Reported				46.1	5.55	



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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L	3440	3530	2940 - 4010	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.569	3540	184	Y. Cardona
1005	Antimony	µg/L	650	693	566 - 799	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.949	682	33.8	Y. Cardona
1010	Arsenic	µg/L	410	456	380 - 527	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-1.91	455	23.4	Y. Cardona
1015	Barium	µg/L	365	349	297 - 401	Acceptable	EPA 200.7 4.4 1994	2/24/2017	1.14	347	15.9	Y. Cardona
1020	Beryllium	µg/L	381	394	335 - 453	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.583	393	20.4	Y. Cardona
1025	Boron	µg/L	1590	1680	1430 - 1930	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.624	1640	83.8	Y. Cardona
1030	Cadmium	µg/L	218	210	178 - 242	Acceptable	EPA 200.7 4.4 1994	2/24/2017	1.23	206	9.35	Y. Cardona
1040	Chromium	µg/L	610	614	522 - 706	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.449	622	26.1	Y. Cardona
1050	Cobalt	µg/L	930	860	731 - 989	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.728	899	42.0	Y. Cardona
1055	Copper	µg/L	394	375	319 - 431	Acceptable	EPA 200.7 4.4 1994	2/24/2017	1.09	375	17.7	Y. Cardona
1070	Iron	µg/L	3640	3590	3050 - 4130	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.0407	3630	174	Y. Cardona
1075	Lead	µg/L	830	824	700 - 948	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.181	823	37.9	Y. Cardona
1090	Manganese	µg/L	1299	1290	1100 - 1480	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.494	1330	62.9	Y. Cardona
1100	Molybdenum	µg/L	536	554	482 - 621	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.398	546	25.3	Y. Cardona
1105	Nickel	µg/L	655	637	558 - 721	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.352	644	30.2	Y. Cardona
1140	Selenium	µg/L	760	882	750 - 1010	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-2.41	872	46.4	Y. Cardona
1150	Silver	µg/L	231	224	190 - 258	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.586	224	12.0	Y. Cardona
1160	Strontium	µg/L	456	452	384 - 520	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.0916	454	20.4	Y. Cardona
1165	Thallium	µg/L	400	379	308 - 443	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.862	380	23.2	Y. Cardona
1185	Vanadium	µg/L	212	222	189 - 255	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.368	216	11.6	Y. Cardona



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TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L	897	918	780 - 1060	Acceptable	EPA 200.7 4.4 1994	2/24/2017	-0.365	911	39.3	Y. Cardona
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Study # : WP-264





A Waters Company

# WP-264 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
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PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
E359301  
03/06/17  
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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L		3530	2940 - 4010	Not Reported				3540	184	
1005	Antimony	µg/L		693	566 - 799	Not Reported				682	33.8	
1010	Arsenic	µg/L		456	380 - 527	Not Reported				455	23.4	
1015	Barium	µg/L		349	297 - 401	Not Reported				347	15.9	
1020	Beryllium	µg/L		394	335 - 453	Not Reported				393	20.4	
1025	Boron	µg/L		1680	1430 - 1930	Not Reported				1640	83.8	
1030	Cadmium	µg/L		210	178 - 242	Not Reported				206	9.35	
1040	Chromium	µg/L		614	522 - 706	Not Reported				622	26.1	
1050	Cobalt	µg/L		860	731 - 989	Not Reported				899	42.0	
1055	Copper	µg/L		375	319 - 431	Not Reported				375	17.7	
1070	Iron	µg/L		3590	3050 - 4130	Not Reported				3630	174	
1075	Lead	µg/L	827	824	700 - 948	Acceptable	EPA 200.9 3 1998	2/28/2017	0.101	823	37.9	C. Rodríguez
1090	Manganese	µg/L		1290	1100 - 1480	Not Reported				1330	62.9	
1100	Molybdenum	µg/L		554	482 - 621	Not Reported				546	25.3	
1105	Nickel	µg/L		637	558 - 721	Not Reported				644	30.2	
1140	Selenium	µg/L		882	750 - 1010	Not Reported				872	46.4	
1150	Silver	µg/L		224	190 - 258	Not Reported				224	12.0	
1160	Strontium	µg/L		452	384 - 520	Not Reported				454	20.4	
1165	Thallium	µg/L		379	308 - 443	Not Reported				380	23.2	
1185	Vanadium	µg/L		222	189 - 255	Not Reported				216	11.6	



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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L		918	780 - 1060	Not Reported				911	39.3	
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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L	3440	3530	2940 - 4010	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.569	3540	184	Y. Cardona
1005	Antimony	µg/L	650	693	566 - 799	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.949	682	33.8	Y. Cardona
1010	Arsenic	µg/L	410	456	380 - 527	Acceptable	EPA 6010B 2 1996	2/24/2017	-1.91	455	23.4	Y. Cardona
1015	Barium	µg/L	365	349	297 - 401	Acceptable	EPA 6010B 2 1996	2/24/2017	1.14	347	15.9	Y. Cardona
1020	Beryllium	µg/L	381	394	335 - 453	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.583	393	20.4	Y. Cardona
1025	Boron	µg/L	1590	1680	1430 - 1930	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.624	1640	83.8	Y. Cardona
1030	Cadmium	µg/L	218	210	178 - 242	Acceptable	EPA 6010B 2 1996	2/24/2017	1.23	206	9.35	Y. Cardona
1040	Chromium	µg/L	610	614	522 - 706	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.449	622	26.1	Y. Cardona
1050	Cobalt	µg/L	930	860	731 - 989	Acceptable	EPA 6010B 2 1996	2/24/2017	0.728	899	42.0	Y. Cardona
1055	Copper	µg/L	394	375	319 - 431	Acceptable	EPA 6010B 2 1996	2/24/2017	1.09	375	17.7	Y. Cardona
1070	Iron	µg/L	3640	3590	3050 - 4130	Acceptable	EPA 6010B 2 1996	2/24/2017	0.0407	3630	174	Y. Cardona
1075	Lead	µg/L	830	824	700 - 948	Acceptable	EPA 6010B 2 1996	2/24/2017	0.181	823	37.9	Y. Cardona
1090	Manganese	µg/L	1299	1290	1100 - 1480	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.494	1330	62.9	Y. Cardona
1100	Molybdenum	µg/L	536	554	482 - 621	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.398	546	25.3	Y. Cardona
1105	Nickel	µg/L	655	637	558 - 721	Acceptable	EPA 6010B 2 1996	2/24/2017	0.352	644	30.2	Y. Cardona
1140	Selenium	µg/L	760	882	750 - 1010	Acceptable	EPA 6010B 2 1996	2/24/2017	-2.41	872	46.4	Y. Cardona
1150	Silver	µg/L	231	224	190 - 258	Acceptable	EPA 6010B 2 1996	2/24/2017	0.586	224	12.0	Y. Cardona
1160	Strontium	µg/L	456	452	384 - 520	Acceptable	EPA 6010B 2 1996	2/24/2017	0.0916	454	20.4	Y. Cardona
1165	Thallium	µg/L	400	379	308 - 443	Acceptable	EPA 6010B 2 1996	2/24/2017	0.862	380	23.2	Y. Cardona
1185	Vanadium	µg/L	212	222	189 - 255	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.368	216	11.6	Y. Cardona



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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L	897	918	780 - 1060	Acceptable	EPA 6010B 2 1996	2/24/2017	-0.365	911	39.3	Y. Cardona
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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L	3440	3530	2940 - 4010	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.569	3540	184	Y. Cardona
1005	Antimony	µg/L	650	693	566 - 799	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.949	682	33.8	Y. Cardona
1010	Arsenic	µg/L	410	456	380 - 527	Acceptable	SM 3120 B-2011 2011	2/24/2017	-1.91	455	23.4	Y. Cardona
1015	Barium	µg/L	365	349	297 - 401	Acceptable	SM 3120 B-2011 2011	2/24/2017	1.14	347	15.9	Y. Cardona
1020	Beryllium	µg/L	381	394	335 - 453	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.583	393	20.4	Y. Cardona
1025	Boron	µg/L	1590	1680	1430 - 1930	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.624	1640	83.8	Y. Cardona
1030	Cadmium	µg/L	218	210	178 - 242	Acceptable	SM 3120 B-2011 2011	2/24/2017	1.23	206	9.35	Y. Cardona
1040	Chromium	µg/L	610	614	522 - 706	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.449	622	26.1	Y. Cardona
1050	Cobalt	µg/L	930	860	731 - 989	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.728	899	42.0	Y. Cardona
1055	Copper	µg/L	394	375	319 - 431	Acceptable	SM 3120 B-2011 2011	2/24/2017	1.09	375	17.7	Y. Cardona
1070	Iron	µg/L	3640	3590	3050 - 4130	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.0407	3630	174	Y. Cardona
1075	Lead	µg/L	830	824	700 - 948	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.181	823	37.9	Y. Cardona
1090	Manganese	µg/L	1299	1290	1100 - 1480	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.494	1330	62.9	Y. Cardona
1100	Molybdenum	µg/L	536	554	482 - 621	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.398	546	25.3	Y. Cardona
1105	Nickel	µg/L	655	637	558 - 721	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.352	644	30.2	Y. Cardona
1140	Selenium	µg/L	760	882	750 - 1010	Acceptable	SM 3120 B-2011 2011	2/24/2017	-2.41	872	46.4	Y. Cardona
1150	Silver	µg/L	231	224	190 - 258	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.586	224	12.0	Y. Cardona
1160	Strontium	µg/L	456	452	384 - 520	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.0916	454	20.4	Y. Cardona
1165	Thallium	µg/L	400	379	308 - 443	Acceptable	SM 3120 B-2011 2011	2/24/2017	0.862	380	23.2	Y. Cardona
1185	Vanadium	µg/L	212	222	189 - 255	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.368	216	11.6	Y. Cardona



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Study # : WP-264





A Waters Company

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Janet Gomez  
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PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L	897	918	780 - 1060	Acceptable	SM 3120 B-2011 2011	2/24/2017	-0.365	911	39.3	Y. Cardona
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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L		3530	2940 - 4010	Not Reported				3540	184	
1005	Antimony	µg/L		693	566 - 799	Not Reported				682	33.8	
1010	Arsenic	µg/L		456	380 - 527	Not Reported				455	23.4	
1015	Barium	µg/L		349	297 - 401	Not Reported				347	15.9	
1020	Beryllium	µg/L		394	335 - 453	Not Reported				393	20.4	
1025	Boron	µg/L		1680	1430 - 1930	Not Reported				1640	83.8	
1030	Cadmium	µg/L		210	178 - 242	Not Reported				206	9.35	
1040	Chromium	µg/L		614	522 - 706	Not Reported				622	26.1	
1050	Cobalt	µg/L		860	731 - 989	Not Reported				899	42.0	
1055	Copper	µg/L		375	319 - 431	Not Reported				375	17.7	
1070	Iron	µg/L		3590	3050 - 4130	Not Reported				3630	174	
1075	Lead	µg/L	827	824	700 - 948	Acceptable	EPA 7010 1998	2/28/2017	0.101	823	37.9	C. Rodríguez
1090	Manganese	µg/L		1290	1100 - 1480	Not Reported				1330	62.9	
1100	Molybdenum	µg/L		554	482 - 621	Not Reported				546	25.3	
1105	Nickel	µg/L		637	558 - 721	Not Reported				644	30.2	
1140	Selenium	µg/L		882	750 - 1010	Not Reported				872	46.4	
1150	Silver	µg/L		224	190 - 258	Not Reported				224	12.0	
1160	Strontium	µg/L		452	384 - 520	Not Reported				454	20.4	
1165	Thallium	µg/L		379	308 - 443	Not Reported				380	23.2	
1185	Vanadium	µg/L		222	189 - 255	Not Reported				216	11.6	



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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L		918	780 - 1060	Not Reported				911	39.3	
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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L	3440	3530	2940 - 4010	Acceptable	EPA 6010C 2000	2/24/2017	-0.569	3540	184	Y. Cardona
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1015	Barium	µg/L	365	349	297 - 401	Acceptable	EPA 6010C 2000	2/24/2017	1.14	347	15.9	Y. Cardona
1020	Beryllium	µg/L	381	394	335 - 453	Acceptable	EPA 6010C 2000	2/24/2017	-0.583	393	20.4	Y. Cardona
1025	Boron	µg/L	1590	1680	1430 - 1930	Acceptable	EPA 6010C 2000	2/24/2017	-0.624	1640	83.8	Y. Cardona
1030	Cadmium	µg/L	218	210	178 - 242	Acceptable	EPA 6010C 2000	2/24/2017	1.23	206	9.35	Y. Cardona
1040	Chromium	µg/L	610	614	522 - 706	Acceptable	EPA 6010C 2000	2/24/2017	-0.449	622	26.1	Y. Cardona
1050	Cobalt	µg/L	930	860	731 - 989	Acceptable	EPA 6010C 2000	2/24/2017	0.728	899	42.0	Y. Cardona
1055	Copper	µg/L	394	375	319 - 431	Acceptable	EPA 6010C 2000	2/24/2017	1.09	375	17.7	Y. Cardona
1070	Iron	µg/L	3640	3590	3050 - 4130	Acceptable	EPA 6010C 2000	2/24/2017	0.0407	3630	174	Y. Cardona
1075	Lead	µg/L	830	824	700 - 948	Acceptable	EPA 6010C 2000	2/24/2017	0.181	823	37.9	Y. Cardona
1090	Manganese	µg/L	1299	1290	1100 - 1480	Acceptable	EPA 6010C 2000	2/24/2017	-0.494	1330	62.9	Y. Cardona
1100	Molybdenum	µg/L	536	554	482 - 621	Acceptable	EPA 6010C 2000	2/24/2017	-0.398	546	25.3	Y. Cardona
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1150	Silver	µg/L	231	224	190 - 258	Acceptable	EPA 6010C 2000	2/24/2017	0.586	224	12.0	Y. Cardona
1160	Strontium	µg/L	456	452	384 - 520	Acceptable	EPA 6010C 2000	2/24/2017	0.0916	454	20.4	Y. Cardona
1165	Thallium	µg/L	400	379	308 - 443	Acceptable	EPA 6010C 2000	2/24/2017	0.862	380	23.2	Y. Cardona
1185	Vanadium	µg/L	212	222	189 - 255	Acceptable	EPA 6010C 2000	2/24/2017	-0.368	216	11.6	Y. Cardona



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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L	897	918	780 - 1060	Acceptable	EPA 6010C 2000	2/24/2017	-0.365	911	39.3	Y. Cardona
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787-288-6420

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ERA Customer Number:  
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Study Dates:

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**WP Trace Metals (cat# 586, lot# P264-500)**

1000	Aluminum	µg/L	3440	3530	2940 - 4010	Acceptable	EPA 6010D 2014	2/24/2017	-0.569	3540	184	Y. Cardona
1005	Antimony	µg/L	650	693	566 - 799	Acceptable	EPA 6010D 2014	2/24/2017	-0.949	682	33.8	Y. Cardona
1010	Arsenic	µg/L	410	456	380 - 527	Acceptable	EPA 6010D 2014	2/24/2017	-1.91	455	23.4	Y. Cardona
1015	Barium	µg/L	365	349	297 - 401	Acceptable	EPA 6010D 2014	2/24/2017	1.14	347	15.9	Y. Cardona
1020	Beryllium	µg/L	381	394	335 - 453	Acceptable	EPA 6010D 2014	2/24/2017	-0.583	393	20.4	Y. Cardona
1025	Boron	µg/L	1590	1680	1430 - 1930	Acceptable	EPA 6010D 2014	2/24/2017	-0.624	1640	83.8	Y. Cardona
1030	Cadmium	µg/L	218	210	178 - 242	Acceptable	EPA 6010D 2014	2/24/2017	1.23	206	9.35	Y. Cardona
1040	Chromium	µg/L	610	614	522 - 706	Acceptable	EPA 6010D 2014	2/24/2017	-0.449	622	26.1	Y. Cardona
1050	Cobalt	µg/L	930	860	731 - 989	Acceptable	EPA 6010D 2014	2/24/2017	0.728	899	42.0	Y. Cardona
1055	Copper	µg/L	394	375	319 - 431	Acceptable	EPA 6010D 2014	2/24/2017	1.09	375	17.7	Y. Cardona
1070	Iron	µg/L	3640	3590	3050 - 4130	Acceptable	EPA 6010D 2014	2/24/2017	0.0407	3630	174	Y. Cardona
1075	Lead	µg/L	830	824	700 - 948	Acceptable	EPA 6010D 2014	2/24/2017	0.181	823	37.9	Y. Cardona
1090	Manganese	µg/L	1299	1290	1100 - 1480	Acceptable	EPA 6010D 2014	2/24/2017	-0.494	1330	62.9	Y. Cardona
1100	Molybdenum	µg/L	536	554	482 - 621	Acceptable	EPA 6010D 2014	2/24/2017	-0.398	546	25.3	Y. Cardona
1105	Nickel	µg/L	655	637	558 - 721	Acceptable	EPA 6010D 2014	2/24/2017	0.352	644	30.2	Y. Cardona
1140	Selenium	µg/L	760	882	750 - 1010	Acceptable	EPA 6010D 2014	2/24/2017	-2.41	872	46.4	Y. Cardona
1150	Silver	µg/L	231	224	190 - 258	Acceptable	EPA 6010D 2014	2/24/2017	0.586	224	12.0	Y. Cardona
1160	Strontium	µg/L	456	452	384 - 520	Acceptable	EPA 6010D 2014	2/24/2017	0.0916	454	20.4	Y. Cardona
1165	Thallium	µg/L	400	379	308 - 443	Acceptable	EPA 6010D 2014	2/24/2017	0.862	380	23.2	Y. Cardona
1185	Vanadium	µg/L	212	222	189 - 255	Acceptable	EPA 6010D 2014	2/24/2017	-0.368	216	11.6	Y. Cardona



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Study # : WP-264





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**WP Trace Metals (cat# 586, lot# P264-500) (Continued)**

1190	Zinc	µg/L	897	918	780 - 1060	Acceptable	EPA 6010D 2014	2/24/2017	-0.365	911	39.3	Y. Cardona
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**WP Mercury (cat# 574, lot# P264-514)**

1095	Mercury	µg/L	6.71	5.68	3.98 - 7.38	Acceptable	EPA 245.1 3 1994	2/24/2017	2.45	5.67	0.426	C. Rodríguez
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**WP Low-Level Mercury (cat# 896, lot# P264-931)**

1095	Low Level Mercury	ng/L	70.8	62.7	46.5 - 78.2	Acceptable	EPA 1631E 2002	2/21/2017	1.18	64.0	5.76	C. Rodríguez
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**WP Hexavalent Chromium (cat# 898, lot# P264-984)**

1045	Hexavalent Chromium	µg/L	311	329	274 - 381	Acceptable	SM 3500-Cr B-2011 2011	2/16/2017	-0.965	326	15.2	C. Rivera
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**WP Color (cat# 882, lot# P264-070)**

1605	Color	PC units	35.0	30.0	18.4 - 39.7	Acceptable	EPA 110.2 1971	2/23/2017	1.70	28.9	3.57	G. Valls
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**WP Turbidity (cat# 893, lot# P264-777)**

2055	Turbidity	NTU	3.83	3.78	2.75 - 4.77	Acceptable	EPA 180.1 2 1993	2/24/2017	-0.219	3.89	0.259	Y. Vega
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**WP Turbidity (cat# 893, lot# P264-777)**

2055	Turbidity	NTU	3.83	3.78	2.75 - 4.77	Acceptable	SM 2130 B-2011 2011	2/24/2017	-0.219	3.89	0.259	Y. Vega
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**WP Total Cyanide (cat# 588, lot# P264-502)**

1645	Cyanide, total	mg/L	0.881	0.946	0.615 - 1.28	Acceptable	EPA 335.4 1993	2/21/2017	-0.674	0.921	0.0593	L. Hernández
1510	Amenable Cyanide	mg/L		0.637	0.414 - 0.860	Not Reported				0.633	0.0667	

**WP Total Phenolics (4-AAP) (cat# 589, lot# P264-515)**

1905	Phenolics, total	mg/L	0.958	0.948	0.475 - 1.42	Acceptable	EPA 420.4 1 1993	2/22/2017	-0.179	0.989	0.174	S. Piñero
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**WP Total Phenolics (4-AAP) (cat# 589, lot# P264-515)**

1905	Phenolics, total	mg/L	0.958	0.948	0.475 - 1.42	Acceptable	EPA 9066 1986	2/22/2017	-0.179	0.989	0.174	S. Piñero
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<b>WP Silica (cat# 890, lot# P264-775-A)</b>												
1990	Silica as SiO <sub>2</sub>	mg/L	103	102	76.5 - 128	Acceptable	EPA 200.7 4.4 1994	2/24/2017	0.353	101	6.46	Y. Cardona
<b>WP Sulfide (cat# 891, lot# P264-071)</b>												
2005	Sulfide	mg/L	7.71	9.87	4.99 - 13.8	Acceptable	SM 4500-S <sub>2</sub> D-2011 2011	2/22/2017	-0.445	8.37	1.49	S. Vázquez
<b>WP Surfactants - MBAS (cat# 892, lot# P264-776)</b>												
2025	Surfactants (MBAS)	mg/L	0.342	0.386	0.228 - 0.563	Acceptable	SM 5540 C-2011 2011	2/23/2017	-1.19	0.404	0.0520	D. Silva
<b>WP Total Residual Chlorine (cat# 587, lot# P264-501)</b>												
1940	Total Residual Chlorine	mg/L	0.610	0.590	0.447 - 0.734	Acceptable	SM 4500-Cl G-2011 2011	2/28/2017	1.01	0.567	0.0431	Y. Vega
<b>WP Low-Level Total Residual Chlorine (cat# 881, lot# P264-917)</b>												
1940	Low Level Total Residual Chlorine	µg/L	190	170	110 - 230	Acceptable	SM 4500-Cl G-2011 2011	2/27/2017	1.13	169	18.7	G. Valls



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Study # : WP-264



## 2009 TNI Evaluation Report

Study: **WP-264**

ERA Customer Number: **E359301**

Laboratory Name: **Environmental Quality  
Lab**

### Microbiology Results





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**WP WasteWatR™ Coliform MicrobE™ - SM 9221 (cat# 576A, lot# P264-083A)**

2500	Total Coliforms (MPN)	MPN/100mL	1100	1890	178 - 5120	Acceptable	SM 9221 B + E 21st ED 2001	2/15/2017	0.0209	956	823	M. Maldonado
2530	Fecal Coliforms (MPN)	MPN/100mL	1100	1890	154 - 5880	Acceptable	SM 9221 B + E 21st ED 2001	2/15/2017	0.0211	952	955	M. Maldonado
2525	E.coli (MPN)	MPN/100mL		1890	150 - 5320	Not Reported				894	862	

Per Section 6.4.3 a of the 2009 TNI Standard, "The assigned values for quantitative microbiology analytes shall be equal to the mean of the assigned value verification and/or homogeneity testing per Sections 7.1 and 7.2". The final acceptance limits are derived from the calculated study mean and study standard deviation from laboratory-reported results. Disagreement between the assigned values and study means/acceptance limits are due to the inherent variability of microbiology methods and differences in the methods used by ERA and participant laboratories. For quantitative microbiology analytes, the assigned value is not used in the evaluation of laboratories.



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## 2009 TNI Evaluation Report

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### Organic Results





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**WP Volatiles (cat# 830, lot# P264-710)**

4315	Acetone	µg/L	< 6.00	22.6	4.61 - 42.6	Acceptable	EPA 8260B 2 1996	2/21/2017		21.2	4.10	K. Otero
4320	Acetonitrile	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4325	Acrolein	µg/L	< 25.0	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4340	Acrylonitrile	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4375	Benzene	µg/L	26.0	20.7	14.5 - 26.9	Acceptable	EPA 8260B 2 1996	2/21/2017	2.64	20.7	2.00	K. Otero
4385	Bromobenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4390	Bromochloromethane	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4395	Bromodichloromethane	µg/L	15.9	14.4	8.64 - 20.2	Acceptable	EPA 8260B 2 1996	2/21/2017	1.67	13.7	1.29	K. Otero
4400	Bromoform	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4950	Bromomethane	µg/L	< 2.00	< 8.00	0.00 - 8.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4410	2-Butanone (MEK)	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4435	n-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4440	sec-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4445	tert-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5000	tert-Butyl methyl ether (MTBE)	µg/L	< 1.00	< 9.00	0.00 - 9.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4450	Carbon disulfide	µg/L	< 7.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4455	Carbon tetrachloride	µg/L	< 1.20	< 7.70	0.00 - 7.70	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4475	Chlorobenzene	µg/L	34.8	27.6	19.3 - 35.9	Acceptable	EPA 8260B 2 1996	2/21/2017	3.04	27.7	2.34	K. Otero
4575	Chlorodibromomethane	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4485	Chloroethane	µg/L	34.2	22.8	9.12 - 36.5	Acceptable	EPA 8260B 2 1996	2/21/2017	3.58	23.4	3.03	K. Otero



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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

4500	2-Chloroethylvinylether	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4505	Chloroform	µg/L	14.0	11.6	8.12 - 15.1	Acceptable	EPA 8260B 2 1996	2/21/2017	2.21	11.4	1.19	K. Otero
4960	Chloromethane	µg/L	< 1.20	< 8.00	0.00 - 8.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4535	2-Chlorotoluene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4540	4-Chlorotoluene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/L	< 1.20	< 9.00	0.00 - 9.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4585	1,2-Dibromoethane (EDB)	µg/L	15.3	14.0	9.10 - 18.9	Acceptable	EPA 8260B 2 1996	2/21/2017	1.14	14.0	1.16	K. Otero
4595	Dibromomethane	µg/L	23.8	20.2	13.1 - 27.3	Acceptable	EPA 8260B 2 1996	2/21/2017	1.84	20.4	1.84	K. Otero
4610	1,2-Dichlorobenzene	µg/L	17.5	13.8	9.66 - 17.9	Acceptable	EPA 8260B 2 1996	2/21/2017	2.56	14.1	1.34	K. Otero
4615	1,3-Dichlorobenzene	µg/L	11.2	11.5	8.05 - 15.0	Acceptable	EPA 8260B 2 1996	2/21/2017	-0.322	11.5	1.05	K. Otero
4620	1,4-Dichlorobenzene	µg/L	16.5	13.6	9.52 - 17.7	Acceptable	EPA 8260B 2 1996	2/21/2017	2.20	13.7	1.29	K. Otero
4625	Dichlorodifluoromethane (Freon 12)	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4630	1,1-Dichloroethane	µg/L	< 1.00	< 6.40	0.00 - 6.40	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4635	1,2-Dichloroethane	µg/L	23.7	19.2	13.6 - 26.9	Acceptable	EPA 8260B 2 1996	2/21/2017	2.20	19.7	1.82	K. Otero
4640	1,1-Dichloroethylene	µg/L	47.2	30.8	18.0 - 45.1	Not Acceptable	EPA 8260B 2 1996	2/21/2017	2.95	32.6	4.95	K. Otero
4645	cis-1,2-Dichloroethylene	µg/L	22.7	18.2	12.5 - 24.5	Acceptable	EPA 8260B 2 1996	2/21/2017	2.84	17.8	1.74	K. Otero
4700	trans-1,2-Dichloroethylene	µg/L	31.6	22.3	13.4 - 31.2	Not Acceptable	EPA 8260B 2 1996	2/21/2017	3.13	23.4	2.61	K. Otero
4655	1,2-Dichloropropane	µg/L	< 1.20	< 7.00	0.00 - 7.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4660	1,3-Dichloropropane	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4665	2,2-Dichloropropane	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero



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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

4670	1,1-Dichloropropene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4680	cis-1,3-Dichloropropylene	µg/L	19.3	20.0	13.0 - 27.0	Acceptable	EPA 8260B 2 1996	2/21/2017	1.00	17.4	1.89	K. Otero
4685	trans-1,3-Dichloropropylene	µg/L	< 1.20	< 6.50	0.00 - 6.50	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 8260B 2 1996	2/21/2017		20.5	2.16	K. Otero
4835	Hexachlorobutadiene	µg/L	< 1.40	< 4.30	0.00 - 4.30	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4840	Hexachloroethane	µg/L		< 3.30	0.00 - 3.30	Not Reported						
4860	2-Hexanone	µg/L	34.4	37.8	14.1 - 59.6	Acceptable	EPA 8260B 2 1996	2/21/2017	-0.551	36.8	4.36	K. Otero
4900	Isopropylbenzene	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4910	4-Isopropyltoluene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
4975	Methylene chloride	µg/L	31.3	23.2	13.9 - 32.5	Acceptable	EPA 8260B 2 1996	2/21/2017	3.61	23.1	2.27	K. Otero
4995	4-Methyl-2-pentanone (MIBK)	µg/L	< 6.00	< 2.00	0.00 - 2.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5005	Naphthalene	µg/L	21.8	17.2	7.39 - 25.7	Acceptable	EPA 8260B 2 1996	2/21/2017	1.92	17.2	2.43	K. Otero
5015	Nitrobenzene	µg/L		< 6.20	0.00 - 6.20	Not Reported						
5090	n-Propylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5100	Styrene	µg/L	25.3	20.6	13.4 - 27.8	Acceptable	EPA 8260B 2 1996	2/21/2017	2.64	20.6	1.80	K. Otero
5105	1,1,1,2-Tetrachloroethane	µg/L	< 1.20	< 9.80	0.00 - 9.80	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5110	1,1,2,2-Tetrachloroethane	µg/L	24.0	20.8	13.5 - 28.1	Acceptable	EPA 8260B 2 1996	2/21/2017	1.45	20.9	2.12	K. Otero
5115	Tetrachloroethylene	µg/L	15.2	14.0	6.65 - 18.7	Acceptable	EPA 8260B 2 1996	2/21/2017	1.07	13.3	1.82	K. Otero
5140	Toluene	µg/L	14.0	11.9	8.33 - 15.5	Acceptable	EPA 8260B 2 1996	2/21/2017	1.66	11.9	1.27	K. Otero
5150	1,2,3-Trichlorobenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero



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Study # : WP-264 



A Waters Company

# WP-264 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
E359301  
03/06/17  
01/16/17 - 03/02/17

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

5155	1,2,4-Trichlorobenzene	µg/L	35.1	29.6	11.2 - 40.4	Acceptable	EPA 8260B 2 1996	2/21/2017	2.27	28.7	2.84	K. Otero
5160	1,1,1-Trichloroethane	µg/L	21.0	18.1	10.9 - 25.3	Acceptable	EPA 8260B 2 1996	2/21/2017	1.64	17.6	2.09	K. Otero
5165	1,1,2-Trichloroethane	µg/L	20.1	17.4	12.2 - 22.6	Acceptable	EPA 8260B 2 1996	2/21/2017	1.71	17.6	1.48	K. Otero
5170	Trichloroethylene	µg/L	54.7	43.9	27.8 - 57.7	Acceptable	EPA 8260B 2 1996	2/21/2017	2.16	43.8	5.06	K. Otero
5175	Trichlorofluoromethane	µg/L	26.8	24.2	9.68 - 38.7	Acceptable	EPA 8260B 2 1996	2/21/2017	0.566	24.8	3.54	K. Otero
5180	1,2,3-Trichloropropane (TCP)	µg/L	20.0	16.6	4.91 - 26.9	Acceptable	EPA 8260B 2 1996	2/21/2017	1.55	17.0	1.93	K. Otero
5210	1,2,4-Trimethylbenzene	µg/L	< 1.20	< 6.50	0.00 - 6.50	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5215	1,3,5-Trimethylbenzene	µg/L	14.8	14.4	9.36 - 19.4	Acceptable	EPA 8260B 2 1996	2/21/2017	0.361	14.2	1.54	K. Otero
5225	Vinyl acetate	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5235	Vinyl chloride	µg/L	< 1.20	< 8.00	0.00 - 8.00	Acceptable	EPA 8260B 2 1996	2/21/2017				K. Otero
5240	m&p-Xylene	µg/L	61.7	46.5	27.9 - 65.1	Acceptable	EPA 8260B 2 1996	2/21/2017	2.64	48.1	5.14	K. Otero
5250	o-Xylene	µg/L	30.0	22.4	13.4 - 31.4	Acceptable	EPA 8260B 2 1996	2/21/2017	3.44	22.9	2.07	K. Otero
5260	Xylenes, total	µg/L	91.7	68.9	41.3 - 96.5	Acceptable	EPA 8260B 2 1996	2/21/2017	2.93	71.5	6.90	K. Otero



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**WP Volatiles (cat# 830, lot# P264-710)**

4315	Acetone	µg/L	< 6.00	22.6	4.61 - 42.6	Acceptable	EPA 8260C 2006	2/21/2017		21.2	4.10	K. Otero
4320	Acetonitrile	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4325	Acrolein	µg/L	< 25.0	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4340	Acrylonitrile	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4375	Benzene	µg/L	26.0	20.7	14.5 - 26.9	Acceptable	EPA 8260C 2006	2/21/2017	2.64	20.7	2.00	K. Otero
4385	Bromobenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4390	Bromochloromethane	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4395	Bromodichloromethane	µg/L	15.9	14.4	8.64 - 20.2	Acceptable	EPA 8260C 2006	2/21/2017	1.67	13.7	1.29	K. Otero
4400	Bromoform	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4950	Bromomethane	µg/L	< 2.00	< 8.00	0.00 - 8.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4410	2-Butanone (MEK)	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4435	n-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4440	sec-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4445	tert-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5000	tert-Butyl methyl ether (MTBE)	µg/L	< 1.00	< 9.00	0.00 - 9.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4450	Carbon disulfide	µg/L	< 7.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4455	Carbon tetrachloride	µg/L	< 1.20	< 7.70	0.00 - 7.70	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4475	Chlorobenzene	µg/L	34.8	27.6	19.3 - 35.9	Acceptable	EPA 8260C 2006	2/21/2017	3.04	27.7	2.34	K. Otero
4575	Chlorodibromomethane	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4485	Chloroethane	µg/L	34.2	22.8	9.12 - 36.5	Acceptable	EPA 8260C 2006	2/21/2017	3.58	23.4	3.03	K. Otero



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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

4500	2-Chloroethylvinylether	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4505	Chloroform	µg/L	14.0	11.6	8.12 - 15.1	Acceptable	EPA 8260C 2006	2/21/2017	2.21	11.4	1.19	K. Otero
4960	Chloromethane	µg/L	< 1.20	< 8.00	0.00 - 8.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4535	2-Chlorotoluene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4540	4-Chlorotoluene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/L	< 1.20	< 9.00	0.00 - 9.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4585	1,2-Dibromoethane (EDB)	µg/L	15.3	14.0	9.10 - 18.9	Acceptable	EPA 8260C 2006	2/21/2017	1.14	14.0	1.16	K. Otero
4595	Dibromomethane	µg/L	23.8	20.2	13.1 - 27.3	Acceptable	EPA 8260C 2006	2/21/2017	1.84	20.4	1.84	K. Otero
4610	1,2-Dichlorobenzene	µg/L	17.5	13.8	9.66 - 17.9	Acceptable	EPA 8260C 2006	2/21/2017	2.56	14.1	1.34	K. Otero
4615	1,3-Dichlorobenzene	µg/L	11.2	11.5	8.05 - 15.0	Acceptable	EPA 8260C 2006	2/21/2017	-0.322	11.5	1.05	K. Otero
4620	1,4-Dichlorobenzene	µg/L	16.5	13.6	9.52 - 17.7	Acceptable	EPA 8260C 2006	2/21/2017	2.20	13.7	1.29	K. Otero
4625	Dichlorodifluoromethane (Freon 12)	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4630	1,1-Dichloroethane	µg/L	< 1.00	< 6.40	0.00 - 6.40	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4635	1,2-Dichloroethane	µg/L	23.7	19.2	13.6 - 26.9	Acceptable	EPA 8260C 2006	2/21/2017	2.20	19.7	1.82	K. Otero
4640	1,1-Dichloroethylene	µg/L	47.2	30.8	18.0 - 45.1	Not Acceptable	EPA 8260C 2006	2/21/2017	2.95	32.6	4.95	K. Otero
4645	cis-1,2-Dichloroethylene	µg/L	22.7	18.2	12.5 - 24.5	Acceptable	EPA 8260C 2006	2/21/2017	2.84	17.8	1.74	K. Otero
4700	trans-1,2-Dichloroethylene	µg/L	31.6	22.3	13.4 - 31.2	Not Acceptable	EPA 8260C 2006	2/21/2017	3.13	23.4	2.61	K. Otero
4655	1,2-Dichloropropane	µg/L	< 1.20	< 7.00	0.00 - 7.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4660	1,3-Dichloropropane	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4665	2,2-Dichloropropane	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero



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Study # : WP-264





A Waters Company

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Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
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Report Issued:  
Study Dates:

PR00014  
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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

4670	1,1-Dichloropropene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4680	cis-1,3-Dichloropropylene	µg/L	19.3	20.0	13.0 - 27.0	Acceptable	EPA 8260C 2006	2/21/2017	1.00	17.4	1.89	K. Otero
4685	trans-1,3-Dichloropropylene	µg/L	< 1.20	< 6.50	0.00 - 6.50	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 8260C 2006	2/21/2017		20.5	2.16	K. Otero
4835	Hexachlorobutadiene	µg/L	< 1.40	< 4.30	0.00 - 4.30	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4840	Hexachloroethane	µg/L		< 3.30	0.00 - 3.30	Not Reported						
4860	2-Hexanone	µg/L	34.4	37.8	14.1 - 59.6	Acceptable	EPA 8260C 2006	2/21/2017	-0.551	36.8	4.36	K. Otero
4900	Isopropylbenzene	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4910	4-Isopropyltoluene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
4975	Methylene chloride	µg/L	31.3	23.2	13.9 - 32.5	Acceptable	EPA 8260C 2006	2/21/2017	3.61	23.1	2.27	K. Otero
4995	4-Methyl-2-pentanone (MIBK)	µg/L	< 6.00	< 2.00	0.00 - 2.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5005	Naphthalene	µg/L	21.8	17.2	7.39 - 25.7	Acceptable	EPA 8260C 2006	2/21/2017	1.92	17.2	2.43	K. Otero
5015	Nitrobenzene	µg/L		< 6.20	0.00 - 6.20	Not Reported						
5090	n-Propylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5100	Styrene	µg/L	25.3	20.6	13.4 - 27.8	Acceptable	EPA 8260C 2006	2/21/2017	2.64	20.6	1.80	K. Otero
5105	1,1,1,2-Tetrachloroethane	µg/L	< 1.20	< 9.80	0.00 - 9.80	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5110	1,1,2,2-Tetrachloroethane	µg/L	24.0	20.8	13.5 - 28.1	Acceptable	EPA 8260C 2006	2/21/2017	1.45	20.9	2.12	K. Otero
5115	Tetrachloroethylene	µg/L	15.2	14.0	6.65 - 18.7	Acceptable	EPA 8260C 2006	2/21/2017	1.07	13.3	1.82	K. Otero
5140	Toluene	µg/L	14.0	11.9	8.33 - 15.5	Acceptable	EPA 8260C 2006	2/21/2017	1.66	11.9	1.27	K. Otero
5150	1,2,3-Trichlorobenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero



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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

5155	1,2,4-Trichlorobenzene	µg/L	35.1	29.6	11.2 - 40.4	Acceptable	EPA 8260C 2006	2/21/2017	2.27	28.7	2.84	K. Otero
5160	1,1,1-Trichloroethane	µg/L	21.0	18.1	10.9 - 25.3	Acceptable	EPA 8260C 2006	2/21/2017	1.64	17.6	2.09	K. Otero
5165	1,1,2-Trichloroethane	µg/L	20.1	17.4	12.2 - 22.6	Acceptable	EPA 8260C 2006	2/21/2017	1.71	17.6	1.48	K. Otero
5170	Trichloroethylene	µg/L	54.7	43.9	27.8 - 57.7	Acceptable	EPA 8260C 2006	2/21/2017	2.16	43.8	5.06	K. Otero
5175	Trichlorofluoromethane	µg/L	26.8	24.2	9.68 - 38.7	Acceptable	EPA 8260C 2006	2/21/2017	0.566	24.8	3.54	K. Otero
5180	1,2,3-Trichloropropane (TCP)	µg/L	20.0	16.6	4.91 - 26.9	Acceptable	EPA 8260C 2006	2/21/2017	1.55	17.0	1.93	K. Otero
5210	1,2,4-Trimethylbenzene	µg/L	< 1.20	< 6.50	0.00 - 6.50	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5215	1,3,5-Trimethylbenzene	µg/L	14.8	14.4	9.36 - 19.4	Acceptable	EPA 8260C 2006	2/21/2017	0.361	14.2	1.54	K. Otero
5225	Vinyl acetate	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5235	Vinyl chloride	µg/L	< 1.20	< 8.00	0.00 - 8.00	Acceptable	EPA 8260C 2006	2/21/2017				K. Otero
5240	m&p-Xylene	µg/L	61.7	46.5	27.9 - 65.1	Acceptable	EPA 8260C 2006	2/21/2017	2.64	48.1	5.14	K. Otero
5250	o-Xylene	µg/L	30.0	22.4	13.4 - 31.4	Acceptable	EPA 8260C 2006	2/21/2017	3.44	22.9	2.07	K. Otero
5260	Xylenes, total	µg/L	91.7	68.9	41.3 - 96.5	Acceptable	EPA 8260C 2006	2/21/2017	2.93	71.5	6.90	K. Otero



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**WP Volatiles (cat# 830, lot# P264-710)**

4315	Acetone	µg/L	< 6.00	22.6	4.61 - 42.6	Acceptable	EPA 624 Appendix A 1982	2/21/2017		21.2	4.10	K. Otero
4320	Acetonitrile	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4325	Acrolein	µg/L	< 25.0	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4340	Acrylonitrile	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4375	Benzene	µg/L	26.0	20.7	14.5 - 26.9	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.64	20.7	2.00	K. Otero
4385	Bromobenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4390	Bromochloromethane	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4395	Bromodichloromethane	µg/L	15.9	14.4	8.64 - 20.2	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.67	13.7	1.29	K. Otero
4400	Bromoform	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4950	Bromomethane	µg/L	< 2.00	< 8.00	0.00 - 8.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4410	2-Butanone (MEK)	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4435	n-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4440	sec-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4445	tert-Butylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5000	tert-Butyl methyl ether (MTBE)	µg/L	< 1.00	< 9.00	0.00 - 9.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4450	Carbon disulfide	µg/L	< 7.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4455	Carbon tetrachloride	µg/L	< 1.20	< 7.70	0.00 - 7.70	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4475	Chlorobenzene	µg/L	34.8	27.6	19.3 - 35.9	Acceptable	EPA 624 Appendix A 1982	2/21/2017	3.04	27.7	2.34	K. Otero
4575	Chlorodibromomethane	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4485	Chloroethane	µg/L	34.2	22.8	9.12 - 36.5	Acceptable	EPA 624 Appendix A 1982	2/21/2017	3.58	23.4	3.03	K. Otero



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Study # : WP-264 



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# WP-264 2009 TNI Evaluation Final Complete Report

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Santurce, PR 00910  
787-288-6420

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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

4500	2-Chloroethylvinylether	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4505	Chloroform	µg/L	14.0	11.6	8.12 - 15.1	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.21	11.4	1.19	K. Otero
4960	Chloromethane	µg/L	< 1.20	< 8.00	0.00 - 8.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4535	2-Chlorotoluene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4540	4-Chlorotoluene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/L	< 1.20	< 9.00	0.00 - 9.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4585	1,2-Dibromoethane (EDB)	µg/L	15.3	14.0	9.10 - 18.9	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.14	14.0	1.16	K. Otero
4595	Dibromomethane	µg/L	23.8	20.2	13.1 - 27.3	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.84	20.4	1.84	K. Otero
4610	1,2-Dichlorobenzene	µg/L	17.5	13.8	9.66 - 17.9	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.56	14.1	1.34	K. Otero
4615	1,3-Dichlorobenzene	µg/L	11.2	11.5	8.05 - 15.0	Acceptable	EPA 624 Appendix A 1982	2/21/2017	-0.322	11.5	1.05	K. Otero
4620	1,4-Dichlorobenzene	µg/L	16.5	13.6	9.52 - 17.7	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.20	13.7	1.29	K. Otero
4625	Dichlorodifluoromethane (Freon 12)	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4630	1,1-Dichloroethane	µg/L	< 1.00	< 6.40	0.00 - 6.40	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4635	1,2-Dichloroethane	µg/L	23.7	19.2	13.6 - 26.9	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.20	19.7	1.82	K. Otero
4640	1,1-Dichloroethylene	µg/L	47.2	30.8	18.0 - 45.1	Not Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.95	32.6	4.95	K. Otero
4645	cis-1,2-Dichloroethylene	µg/L	22.7	18.2	12.5 - 24.5	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.84	17.8	1.74	K. Otero
4700	trans-1,2-Dichloroethylene	µg/L	31.6	22.3	13.4 - 31.2	Not Acceptable	EPA 624 Appendix A 1982	2/21/2017	3.13	23.4	2.61	K. Otero
4655	1,2-Dichloropropane	µg/L	< 1.20	< 7.00	0.00 - 7.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4660	1,3-Dichloropropane	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4665	2,2-Dichloropropane	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero



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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

4670	1,1-Dichloropropene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4680	cis-1,3-Dichloropropylene	µg/L	19.3	20.0	13.0 - 27.0	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.00	17.4	1.89	K. Otero
4685	trans-1,3-Dichloropropylene	µg/L	< 1.20	< 6.50	0.00 - 6.50	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4765	Ethylbenzene	µg/L	< 1.20	20.2	14.1 - 26.3	Not Acceptable	EPA 624 Appendix A 1982	2/21/2017		20.5	2.16	K. Otero
4835	Hexachlorobutadiene	µg/L	< 1.40	< 4.30	0.00 - 4.30	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4840	Hexachloroethane	µg/L		< 3.30	0.00 - 3.30	Not Reported						
4860	2-Hexanone	µg/L	34.4	37.8	14.1 - 59.6	Acceptable	EPA 624 Appendix A 1982	2/21/2017	-0.551	36.8	4.36	K. Otero
4900	Isopropylbenzene	µg/L	< 2.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4910	4-Isopropyltoluene	µg/L	< 1.40	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
4975	Methylene chloride	µg/L	31.3	23.2	13.9 - 32.5	Acceptable	EPA 624 Appendix A 1982	2/21/2017	3.61	23.1	2.27	K. Otero
4995	4-Methyl-2-pentanone (MIBK)	µg/L	< 6.00	< 2.00	0.00 - 2.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5005	Naphthalene	µg/L	21.8	17.2	7.39 - 25.7	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.92	17.2	2.43	K. Otero
5015	Nitrobenzene	µg/L		< 6.20	0.00 - 6.20	Not Reported						
5090	n-Propylbenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5100	Styrene	µg/L	25.3	20.6	13.4 - 27.8	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.64	20.6	1.80	K. Otero
5105	1,1,1,2-Tetrachloroethane	µg/L	< 1.20	< 9.80	0.00 - 9.80	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5110	1,1,2,2-Tetrachloroethane	µg/L	24.0	20.8	13.5 - 28.1	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.45	20.9	2.12	K. Otero
5115	Tetrachloroethylene	µg/L	15.2	14.0	6.65 - 18.7	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.07	13.3	1.82	K. Otero
5140	Toluene	µg/L	14.0	11.9	8.33 - 15.5	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.66	11.9	1.27	K. Otero
5150	1,2,3-Trichlorobenzene	µg/L	< 1.20	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero



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**WP Volatiles (cat# 830, lot# P264-710) (Continued)**

5155	1,2,4-Trichlorobenzene	µg/L	35.1	29.6	11.2 - 40.4	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.27	28.7	2.84	K. Otero
5160	1,1,1-Trichloroethane	µg/L	21.0	18.1	10.9 - 25.3	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.64	17.6	2.09	K. Otero
5165	1,1,2-Trichloroethane	µg/L	20.1	17.4	12.2 - 22.6	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.71	17.6	1.48	K. Otero
5170	Trichloroethylene	µg/L	54.7	43.9	27.8 - 57.7	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.16	43.8	5.06	K. Otero
5175	Trichlorofluoromethane	µg/L	26.8	24.2	9.68 - 38.7	Acceptable	EPA 624 Appendix A 1982	2/21/2017	0.566	24.8	3.54	K. Otero
5180	1,2,3-Trichloropropane (TCP)	µg/L	20.0	16.6	4.91 - 26.9	Acceptable	EPA 624 Appendix A 1982	2/21/2017	1.55	17.0	1.93	K. Otero
5210	1,2,4-Trimethylbenzene	µg/L	< 1.20	< 6.50	0.00 - 6.50	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5215	1,3,5-Trimethylbenzene	µg/L	14.8	14.4	9.36 - 19.4	Acceptable	EPA 624 Appendix A 1982	2/21/2017	0.361	14.2	1.54	K. Otero
5225	Vinyl acetate	µg/L	< 6.00	< 5.00	0.00 - 5.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5235	Vinyl chloride	µg/L	< 1.20	< 8.00	0.00 - 8.00	Acceptable	EPA 624 Appendix A 1982	2/21/2017				K. Otero
5240	m&p-Xylene	µg/L	61.7	46.5	27.9 - 65.1	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.64	48.1	5.14	K. Otero
5250	o-Xylene	µg/L	30.0	22.4	13.4 - 31.4	Acceptable	EPA 624 Appendix A 1982	2/21/2017	3.44	22.9	2.07	K. Otero
5260	Xylenes, total	µg/L	91.7	68.9	41.3 - 96.5	Acceptable	EPA 624 Appendix A 1982	2/21/2017	2.93	71.5	6.90	K. Otero



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**WP Chlorinated Acid Herbicides (cat# 829, lot# P264-718)**

8505	Acifluorfen	µg/L	4.50	6.43	0.643 - 10.0	Acceptable	EPA 8151A 1998	3/1/2017	-0.386	5.11	1.58	L. Cruz
8530	Bentazon	µg/L	3.00	4.46	0.714 - 7.30	Acceptable	EPA 8151A 1998	3/1/2017	-0.640	3.61	0.950	L. Cruz
8540	Chloramben	µg/L	5.03	8.06	0.806 - 11.9	Acceptable	EPA 8151A 1998	3/1/2017	0.0531	4.94	1.67	L. Cruz
8545	2,4-D	µg/L	2.08	2.62	0.262 - 4.27	Acceptable	EPA 8151A 1998	3/1/2017	-0.601	2.36	0.466	L. Cruz
8560	2,4-DB	µg/L	8.27	8.90	1.08 - 14.6	Acceptable	EPA 8151A 1998	3/1/2017	0.213	8.05	1.02	L. Cruz
8550	Dacthal diacid (DCPA)	µg/L	3.59	4.86	0.486 - 7.10	Acceptable	EPA 8151A 1998	3/1/2017	-0.129	3.73	1.05	L. Cruz
8555	Dalapon	µg/L	5.55	8.15	0.815 - 12.8	Acceptable	EPA 8151A 1998	3/1/2017	-0.226	5.83	1.26	L. Cruz
8595	Dicamba	µg/L	1.84	2.48	0.484 - 3.97	Acceptable	EPA 8151A 1998	3/1/2017	-0.392	1.95	0.292	L. Cruz
8600	3,5-Dichlorobenzoic acid	µg/L	3.53	4.48	0.543 - 6.83	Acceptable	EPA 8151A 1998	3/1/2017	-0.214	3.73	0.946	L. Cruz
8605	Dichlorprop	µg/L	2.95	4.07	0.783 - 6.05	Acceptable	EPA 8151A 1998	3/1/2017	-0.730	3.45	0.680	L. Cruz
8620	Dinoseb	µg/L	5.02	8.28	0.828 - 12.9	Acceptable	EPA 8151A 1998	3/1/2017	-0.349	5.81	2.25	L. Cruz
7775	MCPA	µg/L	< 0.500	< 10.0	0.00 - 10.0	Acceptable	EPA 8151A 1998	3/1/2017				L. Cruz
7780	MCPP	µg/L	< 0.500	< 10.0	0.00 - 10.0	Acceptable	EPA 8151A 1998	3/1/2017				L. Cruz
6500	4-Nitrophenol	µg/L	7.17	9.20	0.920 - 14.5	Acceptable	EPA 8151A 1998	3/1/2017	0.191	6.89	1.45	L. Cruz
6605	Pentachlorophenol	µg/L	4.85	7.31	0.969 - 10.9	Acceptable	EPA 8151A 1998	3/1/2017	-0.630	5.64	1.26	L. Cruz
8645	Picloram	µg/L	4.58	6.33	0.633 - 10.2	Acceptable	EPA 8151A 1998	3/1/2017	-0.296	5.00	1.42	L. Cruz
8655	2,4,5-T	µg/L	6.27	7.45	1.66 - 10.7	Acceptable	EPA 8151A 1998	3/1/2017	0.116	6.09	1.58	L. Cruz
8650	2,4,5-TP (Silvex)	µg/L	5.02	6.56	1.54 - 9.71	Acceptable	EPA 8151A 1998	3/1/2017	-0.463	5.54	1.12	L. Cruz



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**WP Chlorinated Acid Herbicides (cat# 829, lot# P264-718)**

8505	Acifluorfen	µg/L	4.50	6.43	0.643 - 10.0	Acceptable	EPA 615 1993	3/1/2017	-0.386	5.11	1.58	L. Cruz
8530	Bentazon	µg/L	3.00	4.46	0.714 - 7.30	Acceptable	EPA 615 1993	3/1/2017	-0.640	3.61	0.950	L. Cruz
8540	Chloramben	µg/L	5.03	8.06	0.806 - 11.9	Acceptable	EPA 615 1993	3/1/2017	0.0531	4.94	1.67	L. Cruz
8545	2,4-D	µg/L	2.08	2.62	0.262 - 4.27	Acceptable	EPA 615 1993	3/1/2017	-0.601	2.36	0.466	L. Cruz
8560	2,4-DB	µg/L	8.27	8.90	1.08 - 14.6	Acceptable	EPA 615 1993	3/1/2017	0.213	8.05	1.02	L. Cruz
8550	Dacthal diacid (DCPA)	µg/L	3.59	4.86	0.486 - 7.10	Acceptable	EPA 615 1993	3/1/2017	-0.129	3.73	1.05	L. Cruz
8555	Dalapon	µg/L	5.55	8.15	0.815 - 12.8	Acceptable	EPA 615 1993	3/1/2017	-0.226	5.83	1.26	L. Cruz
8595	Dicamba	µg/L	1.84	2.48	0.484 - 3.97	Acceptable	EPA 615 1993	3/1/2017	-0.392	1.95	0.292	L. Cruz
8600	3,5-Dichlorobenzoic acid	µg/L	3.53	4.48	0.543 - 6.83	Acceptable	EPA 615 1993	3/1/2017	-0.214	3.73	0.946	L. Cruz
8605	Dichlorprop	µg/L	2.95	4.07	0.783 - 6.05	Acceptable	EPA 615 1993	3/1/2017	-0.730	3.45	0.680	L. Cruz
8620	Dinoseb	µg/L	5.02	8.28	0.828 - 12.9	Acceptable	EPA 615 1993	3/1/2017	-0.349	5.81	2.25	L. Cruz
7775	MCPA	µg/L	< 0.500	< 10.0	0.00 - 10.0	Acceptable	EPA 615 1993	3/1/2017				L. Cruz
7780	MCPP	µg/L	< 0.500	< 10.0	0.00 - 10.0	Acceptable	EPA 615 1993	3/1/2017				L. Cruz
6500	4-Nitrophenol	µg/L	7.17	9.20	0.920 - 14.5	Acceptable	EPA 615 1993	3/1/2017	0.191	6.89	1.45	L. Cruz
6605	Pentachlorophenol	µg/L	4.85	7.31	0.969 - 10.9	Acceptable	EPA 615 1993	3/1/2017	-0.630	5.64	1.26	L. Cruz
8645	Picloram	µg/L	4.58	6.33	0.633 - 10.2	Acceptable	EPA 615 1993	3/1/2017	-0.296	5.00	1.42	L. Cruz
8655	2,4,5-T	µg/L	6.27	7.45	1.66 - 10.7	Acceptable	EPA 615 1993	3/1/2017	0.116	6.09	1.58	L. Cruz
8650	2,4,5-TP (Silvex)	µg/L	5.02	6.56	1.54 - 9.71	Acceptable	EPA 615 1993	3/1/2017	-0.463	5.54	1.12	L. Cruz



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**WP PCBs in Water (cat# 832S, lot# P264-734S)**

8880	Aroclor 1016	µg/L	3.41	4.53	1.69 - 6.24	Acceptable	EPA 8082 1996	2/25/2017	-0.665	3.86	0.678	K. Martinez
8885	Aroclor 1221	µg/L	< 0.250	< 0.800	0.00 - 0.800	Acceptable	EPA 8082 1996	2/25/2017				K. Martinez
8890	Aroclor 1232	µg/L	< 0.0500	< 0.800	0.00 - 0.800	Acceptable	EPA 8082 1996	2/25/2017				K. Martinez
8895	Aroclor 1242	µg/L	< 0.0500	< 0.800	0.00 - 0.800	Acceptable	EPA 8082 1996	2/25/2017				K. Martinez
8900	Aroclor 1248	µg/L	< 0.0500	< 0.800	0.00 - 0.800	Acceptable	EPA 8082 1996	2/25/2017				K. Martinez
8905	Aroclor 1254	µg/L	< 0.0500	< 0.800	0.00 - 0.800	Acceptable	EPA 8082 1996	2/25/2017				K. Martinez
8910	Aroclor 1260	µg/L	< 0.0500	< 0.800	0.00 - 0.800	Acceptable	EPA 8082 1996	2/25/2017				K. Martinez

**WP PCBs in Oil (cat# 835S, lot# P264-729S)**

8880	Aroclor 1016	mg/kg	< 1.42	< 1.70	0.00 - 1.70	Acceptable	EPA 8082 1996	2/26/2017				K. Martinez
8895	Aroclor 1242	mg/kg	< 1.87	< 1.70	0.00 - 1.70	Acceptable	EPA 8082 1996	2/26/2017				K. Martinez
8905	Aroclor 1254	mg/kg	< 2.67	< 1.60	0.00 - 1.60	Acceptable	EPA 8082 1996	2/26/2017				K. Martinez
8910	Aroclor 1260	mg/kg	10.6	13.6	2.66 - 19.7	Acceptable	EPA 8082 1996	2/26/2017	-0.492	12.1	3.00	K. Martinez



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Study # : WP-264





A Waters Company

# WP-264 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

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**WP Base/Neutrals (cat# 833, lot# P264-711)**

5500	Acenaphthene	µg/L	13.3	15.6	5.91 - 20.0	Acceptable	EPA 8270C 3 1996	2/28/2017	0.536	12.1	2.20	L. Cruz
5505	Acenaphthylene	µg/L	< 0.200	< 2.90	0.00 - 2.90	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
5145	2-Amino-1-methylbenzene (o-toluidine)	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5545	Aniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5555	Anthracene	µg/L	48.6	51.8	21.9 - 64.4	Acceptable	EPA 8270C 3 1996	2/28/2017	1.12	41.7	6.12	L. Cruz
5595	Benzidine	µg/L		< 200	0.00 - 200	Not Reported						
5575	Benzo(a)anthracene	µg/L	15.5	14.0	5.60 - 19.0	Acceptable	EPA 8270C 3 1996	2/28/2017	2.28	11.7	1.67	L. Cruz
5585	Benzo(b)fluoranthene	µg/L	23.1	24.2	9.11 - 31.5	Acceptable	EPA 8270C 3 1996	2/28/2017	0.689	21.1	2.94	L. Cruz
5600	Benzo(k)fluoranthene	µg/L	25.7	21.4	4.26 - 34.9	Acceptable	EPA 8270C 3 1996	2/28/2017	1.95	20.1	2.88	L. Cruz
5590	Benzo(g,h,i)perylene	µg/L	17.6	13.7	6.43 - 19.3	Acceptable	EPA 8270C 3 1996	2/28/2017	3.23	11.1	2.02	L. Cruz
5580	Benzo(a)pyrene	µg/L	< 0.250	< 2.40	0.00 - 2.40	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
5630	Benzyl alcohol	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5660	4-Bromophenyl-phenylether	µg/L	81.2	97.8	40.5 - 124	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.270	84.1	10.7	L. Cruz
5670	Butylbenzylphthalate	µg/L	87.0	92.2	26.8 - 125	Acceptable	EPA 8270C 3 1996	2/28/2017	0.533	79.6	13.8	L. Cruz
5680	Carbazole	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5745	4-Chloroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5760	bis(2-Chloroethoxy)methane	µg/L	< 0.250	< 3.90	0.00 - 3.90	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
5765	bis(2-Chloroethyl)ether	µg/L	35.0	41.9	11.4 - 52.7	Acceptable	EPA 8270C 3 1996	2/28/2017	0.689	30.3	6.82	L. Cruz
5790	1-Chloronaphthalene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5795	2-Chloronaphthalene	µg/L	< 0.200	< 6.30	0.00 - 6.30	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711) (Continued)**

5825	4-Chlorophenyl-phenylether	µg/L	33.7	38.2	16.1 - 50.0	Acceptable	EPA 8270C 3 1996	2/28/2017	0.457	31.5	4.75	L. Cruz
5855	Chrysene	µg/L	< 0.200	< 5.80	0.00 - 5.80	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
5895	Dibenz(a,h)anthracene	µg/L	< 0.200	< 6.90	0.00 - 6.90	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
5905	Dibenzofuran	µg/L		< 11.3	0.00 - 11.3	Not Reported						
5925	Di-n-butylphthalate	µg/L	49.3	51.1	19.5 - 70.4	Acceptable	EPA 8270C 3 1996	2/28/2017	0.551	45.8	6.40	L. Cruz
4610	1,2-Dichlorobenzene	µg/L	< 0.200	< 2.00	0.00 - 2.00	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
4615	1,3-Dichlorobenzene	µg/L	< 0.200	< 3.10	0.00 - 3.10	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
4620	1,4-Dichlorobenzene	µg/L	19.3	29.5	4.37 - 36.3	Acceptable	EPA 8270C 3 1996	2/28/2017	0.354	17.4	5.28	L. Cruz
5945	3,3'-Dichlorobenzidine	µg/L	< 0.350	< 5.00	0.00 - 5.00	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
6070	Diethylphthalate	µg/L	< 0.200	< 8.90	0.00 - 8.90	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
6135	Dimethylphthalate	µg/L	94.0	105	10.5 - 153	Acceptable	EPA 8270C 3 1996	2/28/2017	0.147	91.5	17.1	L. Cruz
6185	2,4-Dinitrotoluene	µg/L	42.5	45.1	16.2 - 58.7	Acceptable	EPA 8270C 3 1996	2/28/2017	0.559	38.9	6.40	L. Cruz
6190	2,6-Dinitrotoluene	µg/L	49.8	48.0	19.5 - 58.2	Acceptable	EPA 8270C 3 1996	2/28/2017	0.857	43.4	7.51	L. Cruz
6200	Di-n-octylphthalate	µg/L	43.6	38.9	10.9 - 58.6	Acceptable	EPA 8270C 3 1996	2/28/2017	1.38	34.6	6.53	L. Cruz
6065	bis(2-Ethylhexyl)phthalate	µg/L	< 0.200	< 5.00	0.00 - 5.00	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
6265	Fluoranthene	µg/L	48.2	51.0	24.6 - 63.9	Acceptable	EPA 8270C 3 1996	2/28/2017	0.551	45.4	5.10	L. Cruz
6270	Fluorene	µg/L	38.9	42.2	18.1 - 53.8	Acceptable	EPA 8270C 3 1996	2/28/2017	0.505	36.3	5.10	L. Cruz
6275	Hexachlorobenzene	µg/L	< 0.200	< 8.80	0.00 - 8.80	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
4835	Hexachlorobutadiene	µg/L	34.5	65.7	6.57 - 81.5	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.381	40.0	14.6	L. Cruz
6285	Hexachlorocyclopentadiene	µg/L	130	177	17.7 - 227	Acceptable	EPA 8270C 3 1996	2/28/2017	0.268	117	49.0	L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711) (Continued)**

4840	Hexachloroethane	µg/L	41.8	79.2	7.92 - 87.4	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.174	44.9	17.5	L. Cruz
6315	Indeno(1,2,3-cd)pyrene	µg/L	32.5	36.2	11.0 - 50.6	Acceptable	EPA 8270C 3 1996	2/28/2017	0.831	27.7	5.82	L. Cruz
6320	Isophorone	µg/L	< 0.200	< 7.10	0.00 - 7.10	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
6385	2-Methylnaphthalene	µg/L	28.7	36.5	6.24 - 48.9	Acceptable	EPA 8270C 3 1996	2/28/2017	0.144	28.0	5.20	L. Cruz
5005	Naphthalene	µg/L	58.0	82.1	19.6 - 98.3	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.00670	58.1	10.5	L. Cruz
6460	2-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6465	3-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6470	4-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5015	Nitrobenzene	µg/L	30.2	48.9	15.7 - 59.2	Acceptable	EPA 8270C 3 1996	2/28/2017	-1.11	37.6	6.70	L. Cruz
6525	N-Nitrosodiethylamine	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6530	N-Nitrosodimethylamine	µg/L	70.0	120	12.0 - 135	Acceptable	EPA 8270C 3 1996	2/28/2017	0.333	61.9	24.5	L. Cruz
6535	N-Nitrosodiphenylamine	µg/L	< 0.200	< 5.60	0.00 - 5.60	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
6545	N-Nitroso-di-n-propylamine	µg/L	129	166	54.2 - 208	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.00866	129	24.5	L. Cruz
4659	2,2'-Oxybis(1-Chloropropane)	µg/L		< 3.10	0.00 - 3.10	Not Reported						
6590	Pentachlorobenzene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6615	Phenanthrene	µg/L	48.3	55.8	26.1 - 68.9	Acceptable	EPA 8270C 3 1996	2/28/2017	0.224	47.1	5.49	L. Cruz
6665	Pyrene	µg/L	23.5	24.5	10.7 - 32.9	Acceptable	EPA 8270C 3 1996	2/28/2017	0.669	21.7	2.62	L. Cruz
5095	Pyridine	µg/L	< 0.350	< 10.0	0.00 - 10.0	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz
6715	1,2,4,5-Tetrachlorobenzene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5155	1,2,4-Trichlorobenzene	µg/L	< 0.200	< 2.00	0.00 - 2.00	Acceptable	EPA 8270C 3 1996	2/28/2017				L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711)**

5500	Acenaphthene	µg/L	13.3	15.6	5.91 - 20.0	Acceptable	EPA 8270D 2007	2/28/2017	0.536	12.1	2.20	L. Cruz
5505	Acenaphthylene	µg/L	< 0.200	< 2.90	0.00 - 2.90	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
5145	2-Amino-1-methylbenzene (o-toluidine)	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5545	Aniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5555	Anthracene	µg/L	48.6	51.8	21.9 - 64.4	Acceptable	EPA 8270D 2007	2/28/2017	1.12	41.7	6.12	L. Cruz
5595	Benzidine	µg/L		< 200	0.00 - 200	Not Reported						
5575	Benzo(a)anthracene	µg/L	15.5	14.0	5.60 - 19.0	Acceptable	EPA 8270D 2007	2/28/2017	2.28	11.7	1.67	L. Cruz
5585	Benzo(b)fluoranthene	µg/L	23.1	24.2	9.11 - 31.5	Acceptable	EPA 8270D 2007	2/28/2017	0.689	21.1	2.94	L. Cruz
5600	Benzo(k)fluoranthene	µg/L	25.7	21.4	4.26 - 34.9	Acceptable	EPA 8270D 2007	2/28/2017	1.95	20.1	2.88	L. Cruz
5590	Benzo(g,h,i)perylene	µg/L	17.6	13.7	6.43 - 19.3	Acceptable	EPA 8270D 2007	2/28/2017	3.23	11.1	2.02	L. Cruz
5580	Benzo(a)pyrene	µg/L	< 0.250	< 2.40	0.00 - 2.40	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
5630	Benzyl alcohol	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5660	4-Bromophenyl-phenylether	µg/L	81.2	97.8	40.5 - 124	Acceptable	EPA 8270D 2007	2/28/2017	-0.270	84.1	10.7	L. Cruz
5670	Butylbenzylphthalate	µg/L	87.0	92.2	26.8 - 125	Acceptable	EPA 8270D 2007	2/28/2017	0.533	79.6	13.8	L. Cruz
5680	Carbazole	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5745	4-Chloroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5760	bis(2-Chloroethoxy)methane	µg/L	< 0.250	< 3.90	0.00 - 3.90	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
5765	bis(2-Chloroethyl)ether	µg/L	35.0	41.9	11.4 - 52.7	Acceptable	EPA 8270D 2007	2/28/2017	0.689	30.3	6.82	L. Cruz
5790	1-Chloronaphthalene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5795	2-Chloronaphthalene	µg/L	< 0.200	< 6.30	0.00 - 6.30	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711) (Continued)**

5825	4-Chlorophenyl-phenylether	µg/L	33.7	38.2	16.1 - 50.0	Acceptable	EPA 8270D 2007	2/28/2017	0.457	31.5	4.75	L. Cruz
5855	Chrysene	µg/L	< 0.200	< 5.80	0.00 - 5.80	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
5895	Dibenz(a,h)anthracene	µg/L	< 0.200	< 6.90	0.00 - 6.90	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
5905	Dibenzofuran	µg/L		< 11.3	0.00 - 11.3	Not Reported						
5925	Di-n-butylphthalate	µg/L	49.3	51.1	19.5 - 70.4	Acceptable	EPA 8270D 2007	2/28/2017	0.551	45.8	6.40	L. Cruz
4610	1,2-Dichlorobenzene	µg/L	< 0.200	< 2.00	0.00 - 2.00	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
4615	1,3-Dichlorobenzene	µg/L	< 0.200	< 3.10	0.00 - 3.10	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
4620	1,4-Dichlorobenzene	µg/L	19.3	29.5	4.37 - 36.3	Acceptable	EPA 8270D 2007	2/28/2017	0.354	17.4	5.28	L. Cruz
5945	3,3'-Dichlorobenzidine	µg/L	< 0.350	< 5.00	0.00 - 5.00	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
6070	Diethylphthalate	µg/L	< 0.200	< 8.90	0.00 - 8.90	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
6135	Dimethylphthalate	µg/L	94.0	105	10.5 - 153	Acceptable	EPA 8270D 2007	2/28/2017	0.147	91.5	17.1	L. Cruz
6185	2,4-Dinitrotoluene	µg/L	42.5	45.1	16.2 - 58.7	Acceptable	EPA 8270D 2007	2/28/2017	0.559	38.9	6.40	L. Cruz
6190	2,6-Dinitrotoluene	µg/L	49.8	48.0	19.5 - 58.2	Acceptable	EPA 8270D 2007	2/28/2017	0.857	43.4	7.51	L. Cruz
6200	Di-n-octylphthalate	µg/L	43.6	38.9	10.9 - 58.6	Acceptable	EPA 8270D 2007	2/28/2017	1.38	34.6	6.53	L. Cruz
6065	bis(2-Ethylhexyl)phthalate	µg/L	< 0.200	< 5.00	0.00 - 5.00	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
6265	Fluoranthene	µg/L	48.2	51.0	24.6 - 63.9	Acceptable	EPA 8270D 2007	2/28/2017	0.551	45.4	5.10	L. Cruz
6270	Fluorene	µg/L	38.9	42.2	18.1 - 53.8	Acceptable	EPA 8270D 2007	2/28/2017	0.505	36.3	5.10	L. Cruz
6275	Hexachlorobenzene	µg/L	< 0.200	< 8.80	0.00 - 8.80	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
4835	Hexachlorobutadiene	µg/L	34.5	65.7	6.57 - 81.5	Acceptable	EPA 8270D 2007	2/28/2017	-0.381	40.0	14.6	L. Cruz
6285	Hexachlorocyclopentadiene	µg/L	130	177	17.7 - 227	Acceptable	EPA 8270D 2007	2/28/2017	0.268	117	49.0	L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711) (Continued)**

4840	Hexachloroethane	µg/L	41.8	79.2	7.92 - 87.4	Acceptable	EPA 8270D 2007	2/28/2017	-0.174	44.9	17.5	L. Cruz
6315	Indeno(1,2,3-cd)pyrene	µg/L	32.5	36.2	11.0 - 50.6	Acceptable	EPA 8270D 2007	2/28/2017	0.831	27.7	5.82	L. Cruz
6320	Isophorone	µg/L	< 0.200	< 7.10	0.00 - 7.10	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
6385	2-Methylnaphthalene	µg/L	28.7	36.5	6.24 - 48.9	Acceptable	EPA 8270D 2007	2/28/2017	0.144	28.0	5.20	L. Cruz
5005	Naphthalene	µg/L	58.0	82.1	19.6 - 98.3	Acceptable	EPA 8270D 2007	2/28/2017	-0.00670	58.1	10.5	L. Cruz
6460	2-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6465	3-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6470	4-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5015	Nitrobenzene	µg/L	30.2	48.9	15.7 - 59.2	Acceptable	EPA 8270D 2007	2/28/2017	-1.11	37.6	6.70	L. Cruz
6525	N-Nitrosodiethylamine	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6530	N-Nitrosodimethylamine	µg/L	70.0	120	12.0 - 135	Acceptable	EPA 8270D 2007	2/28/2017	0.333	61.9	24.5	L. Cruz
6535	N-Nitrosodiphenylamine	µg/L	< 0.200	< 5.60	0.00 - 5.60	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
6545	N-Nitroso-di-n-propylamine	µg/L	129	166	54.2 - 208	Acceptable	EPA 8270D 2007	2/28/2017	-0.00866	129	24.5	L. Cruz
4659	2,2'-Oxybis(1-Chloropropane)	µg/L		< 3.10	0.00 - 3.10	Not Reported						
6590	Pentachlorobenzene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6615	Phenanthrene	µg/L	48.3	55.8	26.1 - 68.9	Acceptable	EPA 8270D 2007	2/28/2017	0.224	47.1	5.49	L. Cruz
6665	Pyrene	µg/L	23.5	24.5	10.7 - 32.9	Acceptable	EPA 8270D 2007	2/28/2017	0.669	21.7	2.62	L. Cruz
5095	Pyridine	µg/L	< 0.350	< 10.0	0.00 - 10.0	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz
6715	1,2,4,5-Tetrachlorobenzene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5155	1,2,4-Trichlorobenzene	µg/L	< 0.200	< 2.00	0.00 - 2.00	Acceptable	EPA 8270D 2007	2/28/2017				L. Cruz



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Study # : WP-264 



A Waters Company

# WP-264 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
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**WP Base/Neutrals (cat# 833, lot# P264-711)**

5500	Acenaphthene	µg/L	13.3	15.6	5.91 - 20.0	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.536	12.1	2.20	L. Cruz
5505	Acenaphthylene	µg/L	< 0.200	< 2.90	0.00 - 2.90	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
5145	2-Amino-1-methylbenzene (o-toluidine)	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5545	Aniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5555	Anthracene	µg/L	48.6	51.8	21.9 - 64.4	Acceptable	EPA 625 Appendix A 1982	2/28/2017	1.12	41.7	6.12	L. Cruz
5595	Benzidine	µg/L		< 200	0.00 - 200	Not Reported						
5575	Benzo(a)anthracene	µg/L	15.5	14.0	5.60 - 19.0	Acceptable	EPA 625 Appendix A 1982	2/28/2017	2.28	11.7	1.67	L. Cruz
5585	Benzo(b)fluoranthene	µg/L	23.1	24.2	9.11 - 31.5	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.689	21.1	2.94	L. Cruz
5600	Benzo(k)fluoranthene	µg/L	25.7	21.4	4.26 - 34.9	Acceptable	EPA 625 Appendix A 1982	2/28/2017	1.95	20.1	2.88	L. Cruz
5590	Benzo(g,h,i)perylene	µg/L	17.6	13.7	6.43 - 19.3	Acceptable	EPA 625 Appendix A 1982	2/28/2017	3.23	11.1	2.02	L. Cruz
5580	Benzo(a)pyrene	µg/L	< 0.250	< 2.40	0.00 - 2.40	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
5630	Benzyl alcohol	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5660	4-Bromophenyl-phenylether	µg/L	81.2	97.8	40.5 - 124	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.270	84.1	10.7	L. Cruz
5670	Butylbenzylphthalate	µg/L	87.0	92.2	26.8 - 125	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.533	79.6	13.8	L. Cruz
5680	Carbazole	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5745	4-Chloroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5760	bis(2-Chloroethoxy)methane	µg/L	< 0.250	< 3.90	0.00 - 3.90	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
5765	bis(2-Chloroethyl)ether	µg/L	35.0	41.9	11.4 - 52.7	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.689	30.3	6.82	L. Cruz
5790	1-Chloronaphthalene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5795	2-Chloronaphthalene	µg/L	< 0.200	< 6.30	0.00 - 6.30	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711) (Continued)**

5825	4-Chlorophenyl-phenylether	µg/L	33.7	38.2	16.1 - 50.0	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.457	31.5	4.75	L. Cruz
5855	Chrysene	µg/L	< 0.200	< 5.80	0.00 - 5.80	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
5895	Dibenz(a,h)anthracene	µg/L	< 0.200	< 6.90	0.00 - 6.90	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
5905	Dibenzofuran	µg/L		< 11.3	0.00 - 11.3	Not Reported						
5925	Di-n-butylphthalate	µg/L	49.3	51.1	19.5 - 70.4	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.551	45.8	6.40	L. Cruz
4610	1,2-Dichlorobenzene	µg/L	< 0.200	< 2.00	0.00 - 2.00	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
4615	1,3-Dichlorobenzene	µg/L	< 0.200	< 3.10	0.00 - 3.10	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
4620	1,4-Dichlorobenzene	µg/L	19.3	29.5	4.37 - 36.3	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.354	17.4	5.28	L. Cruz
5945	3,3'-Dichlorobenzidine	µg/L	< 0.350	< 5.00	0.00 - 5.00	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
6070	Diethylphthalate	µg/L	< 0.200	< 8.90	0.00 - 8.90	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
6135	Dimethylphthalate	µg/L	94.0	105	10.5 - 153	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.147	91.5	17.1	L. Cruz
6185	2,4-Dinitrotoluene	µg/L	42.5	45.1	16.2 - 58.7	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.559	38.9	6.40	L. Cruz
6190	2,6-Dinitrotoluene	µg/L	49.8	48.0	19.5 - 58.2	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.857	43.4	7.51	L. Cruz
6200	Di-n-octylphthalate	µg/L	43.6	38.9	10.9 - 58.6	Acceptable	EPA 625 Appendix A 1982	2/28/2017	1.38	34.6	6.53	L. Cruz
6065	bis(2-Ethylhexyl)phthalate	µg/L	< 0.200	< 5.00	0.00 - 5.00	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
6265	Fluoranthene	µg/L	48.2	51.0	24.6 - 63.9	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.551	45.4	5.10	L. Cruz
6270	Fluorene	µg/L	38.9	42.2	18.1 - 53.8	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.505	36.3	5.10	L. Cruz
6275	Hexachlorobenzene	µg/L	< 0.200	< 8.80	0.00 - 8.80	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
4835	Hexachlorobutadiene	µg/L	34.5	65.7	6.57 - 81.5	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.381	40.0	14.6	L. Cruz
6285	Hexachlorocyclopentadiene	µg/L	130	177	17.7 - 227	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.268	117	49.0	L. Cruz



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**WP Base/Neutrals (cat# 833, lot# P264-711) (Continued)**

4840	Hexachloroethane	µg/L	41.8	79.2	7.92 - 87.4	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.174	44.9	17.5	L. Cruz
6315	Indeno(1,2,3-cd)pyrene	µg/L	32.5	36.2	11.0 - 50.6	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.831	27.7	5.82	L. Cruz
6320	Isophorone	µg/L	< 0.200	< 7.10	0.00 - 7.10	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
6385	2-Methylnaphthalene	µg/L	28.7	36.5	6.24 - 48.9	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.144	28.0	5.20	L. Cruz
5005	Naphthalene	µg/L	58.0	82.1	19.6 - 98.3	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.00670	58.1	10.5	L. Cruz
6460	2-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6465	3-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6470	4-Nitroaniline	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5015	Nitrobenzene	µg/L	30.2	48.9	15.7 - 59.2	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-1.11	37.6	6.70	L. Cruz
6525	N-Nitrosodiethylamine	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6530	N-Nitrosodimethylamine	µg/L	70.0	120	12.0 - 135	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.333	61.9	24.5	L. Cruz
6535	N-Nitrosodiphenylamine	µg/L	< 0.200	< 5.60	0.00 - 5.60	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
6545	N-Nitroso-di-n-propylamine	µg/L	129	166	54.2 - 208	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.00866	129	24.5	L. Cruz
4659	2,2'-Oxybis(1-Chloropropane)	µg/L		< 3.10	0.00 - 3.10	Not Reported						
6590	Pentachlorobenzene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
6615	Phenanthrene	µg/L	48.3	55.8	26.1 - 68.9	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.224	47.1	5.49	L. Cruz
6665	Pyrene	µg/L	23.5	24.5	10.7 - 32.9	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.669	21.7	2.62	L. Cruz
5095	Pyridine	µg/L	< 0.350	< 10.0	0.00 - 10.0	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz
6715	1,2,4,5-Tetrachlorobenzene	µg/L		< 10.0	0.00 - 10.0	Not Reported						
5155	1,2,4-Trichlorobenzene	µg/L	< 0.200	< 2.00	0.00 - 2.00	Acceptable	EPA 625 Appendix A 1982	2/28/2017				L. Cruz



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**WP Acids (cat# 834, lot# P264-712)**

5610	Benzoic acid	µg/L		< 30.0	0.00 - 30.0	Not Reported						
5700	4-Chloro-3-methylphenol	µg/L	56.2	75.3	28.6 - 93.1	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.335	59.5	9.91	L. Cruz
5800	2-Chlorophenol	µg/L	36.7	43.0	13.2 - 52.5	Acceptable	EPA 8270C 3 1996	2/28/2017	0.287	34.6	7.39	L. Cruz
6000	2,4-Dichlorophenol	µg/L	59.3	72.0	24.7 - 87.0	Acceptable	EPA 8270C 3 1996	2/28/2017	0.207	57.3	9.74	L. Cruz
6005	2,6-Dichlorophenol	µg/L		48.1	17.2 - 62.6	Not Reported				38.7	5.84	
6130	2,4-Dimethylphenol	µg/L	41.8	47.9	14.1 - 60.6	Acceptable	EPA 8270C 3 1996	2/28/2017	0.602	37.2	7.66	L. Cruz
6360	4,6-Dinitro-2-methylphenol	µg/L	55.5	84.2	25.7 - 118	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.658	64.9	14.3	L. Cruz
6175	2,4-Dinitrophenol	µg/L	107	119	11.9 - 168	Acceptable	EPA 8270C 3 1996	2/28/2017	1.01	80.2	26.5	L. Cruz
6400	2-Methylphenol	µg/L	43.1	53.2	12.5 - 64.5	Acceptable	EPA 8270C 3 1996	2/28/2017	0.662	37.2	8.89	L. Cruz
6410	4-Methylphenol	µg/L	51.1	87.0	8.70 - 114	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.258	55.2	15.9	L. Cruz
6490	2-Nitrophenol	µg/L	74.8	93.1	29.3 - 115	Acceptable	EPA 8270C 3 1996	2/28/2017	0.0457	74.2	12.6	L. Cruz
6500	4-Nitrophenol	µg/L	32.5	110	11.0 - 149	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.615	43.5	17.9	L. Cruz
6605	Pentachlorophenol	µg/L	47.3	52.3	14.5 - 72.6	Acceptable	EPA 8270C 3 1996	2/28/2017	0.523	43.0	8.18	L. Cruz
6625	Phenol	µg/L	40.4	113	11.3 - 152	Acceptable	EPA 8270C 3 1996	2/28/2017	-0.0832	42.0	18.8	L. Cruz
6735	2,3,4,6-Tetrachlorophenol	µg/L		< 30.0	0.00 - 30.0	Not Reported						
6835	2,4,5-Trichlorophenol	µg/L	38.9	43.8	16.2 - 57.9	Acceptable	EPA 8270C 3 1996	2/28/2017	0.196	37.6	6.48	L. Cruz
6840	2,4,6-Trichlorophenol	µg/L	45.4	54.9	20.8 - 67.3	Acceptable	EPA 8270C 3 1996	2/28/2017	0.0867	44.8	7.26	L. Cruz



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**WP Acids (cat# 834, lot# P264-712)**

5610	Benzoic acid	µg/L		< 30.0	0.00 - 30.0	Not Reported						
5700	4-Chloro-3-methylphenol	µg/L	56.2	75.3	28.6 - 93.1	Acceptable	EPA 8270D 2007	2/28/2017	-0.335	59.5	9.91	L. Cruz
5800	2-Chlorophenol	µg/L	36.7	43.0	13.2 - 52.5	Acceptable	EPA 8270D 2007	2/28/2017	0.287	34.6	7.39	L. Cruz
6000	2,4-Dichlorophenol	µg/L	59.3	72.0	24.7 - 87.0	Acceptable	EPA 8270D 2007	2/28/2017	0.207	57.3	9.74	L. Cruz
6005	2,6-Dichlorophenol	µg/L		48.1	17.2 - 62.6	Not Reported				38.7	5.84	
6130	2,4-Dimethylphenol	µg/L	41.8	47.9	14.1 - 60.6	Acceptable	EPA 8270D 2007	2/28/2017	0.602	37.2	7.66	L. Cruz
6360	4,6-Dinitro-2-methylphenol	µg/L	55.5	84.2	25.7 - 118	Acceptable	EPA 8270D 2007	2/28/2017	-0.658	64.9	14.3	L. Cruz
6175	2,4-Dinitrophenol	µg/L	107	119	11.9 - 168	Acceptable	EPA 8270D 2007	2/28/2017	1.01	80.2	26.5	L. Cruz
6400	2-Methylphenol	µg/L	43.1	53.2	12.5 - 64.5	Acceptable	EPA 8270D 2007	2/28/2017	0.662	37.2	8.89	L. Cruz
6410	4-Methylphenol	µg/L	51.1	87.0	8.70 - 114	Acceptable	EPA 8270D 2007	2/28/2017	-0.258	55.2	15.9	L. Cruz
6490	2-Nitrophenol	µg/L	74.8	93.1	29.3 - 115	Acceptable	EPA 8270D 2007	2/28/2017	0.0457	74.2	12.6	L. Cruz
6500	4-Nitrophenol	µg/L	32.5	110	11.0 - 149	Acceptable	EPA 8270D 2007	2/28/2017	-0.615	43.5	17.9	L. Cruz
6605	Pentachlorophenol	µg/L	47.3	52.3	14.5 - 72.6	Acceptable	EPA 8270D 2007	2/28/2017	0.523	43.0	8.18	L. Cruz
6625	Phenol	µg/L	40.4	113	11.3 - 152	Acceptable	EPA 8270D 2007	2/28/2017	-0.0832	42.0	18.8	L. Cruz
6735	2,3,4,6-Tetrachlorophenol	µg/L		< 30.0	0.00 - 30.0	Not Reported						
6835	2,4,5-Trichlorophenol	µg/L	38.9	43.8	16.2 - 57.9	Acceptable	EPA 8270D 2007	2/28/2017	0.196	37.6	6.48	L. Cruz
6840	2,4,6-Trichlorophenol	µg/L	45.4	54.9	20.8 - 67.3	Acceptable	EPA 8270D 2007	2/28/2017	0.0867	44.8	7.26	L. Cruz



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**WP Acids (cat# 834, lot# P264-712)**

5610	Benzoic acid	µg/L		< 30.0	0.00 - 30.0	Not Reported						
5700	4-Chloro-3-methylphenol	µg/L	56.2	75.3	28.6 - 93.1	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.335	59.5	9.91	L. Cruz
5800	2-Chlorophenol	µg/L	36.7	43.0	13.2 - 52.5	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.287	34.6	7.39	L. Cruz
6000	2,4-Dichlorophenol	µg/L	59.3	72.0	24.7 - 87.0	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.207	57.3	9.74	L. Cruz
6005	2,6-Dichlorophenol	µg/L		48.1	17.2 - 62.6	Not Reported				38.7	5.84	
6130	2,4-Dimethylphenol	µg/L	41.8	47.9	14.1 - 60.6	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.602	37.2	7.66	L. Cruz
6360	4,6-Dinitro-2-methylphenol	µg/L	55.5	84.2	25.7 - 118	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.658	64.9	14.3	L. Cruz
6175	2,4-Dinitrophenol	µg/L	107	119	11.9 - 168	Acceptable	EPA 625 Appendix A 1982	2/28/2017	1.01	80.2	26.5	L. Cruz
6400	2-Methylphenol	µg/L	43.1	53.2	12.5 - 64.5	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.662	37.2	8.89	L. Cruz
6410	4-Methylphenol	µg/L	51.1	87.0	8.70 - 114	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.258	55.2	15.9	L. Cruz
6490	2-Nitrophenol	µg/L	74.8	93.1	29.3 - 115	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.0457	74.2	12.6	L. Cruz
6500	4-Nitrophenol	µg/L	32.5	110	11.0 - 149	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.615	43.5	17.9	L. Cruz
6605	Pentachlorophenol	µg/L	47.3	52.3	14.5 - 72.6	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.523	43.0	8.18	L. Cruz
6625	Phenol	µg/L	40.4	113	11.3 - 152	Acceptable	EPA 625 Appendix A 1982	2/28/2017	-0.0832	42.0	18.8	L. Cruz
6735	2,3,4,6-Tetrachlorophenol	µg/L		< 30.0	0.00 - 30.0	Not Reported						
6835	2,4,5-Trichlorophenol	µg/L	38.9	43.8	16.2 - 57.9	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.196	37.6	6.48	L. Cruz
6840	2,4,6-Trichlorophenol	µg/L	45.4	54.9	20.8 - 67.3	Acceptable	EPA 625 Appendix A 1982	2/28/2017	0.0867	44.8	7.26	L. Cruz



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Study # : WP-264





A Waters Company

# WP-264 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
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Santurce, PR 00910  
787-288-6420

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**WP Organochlorine Pesticides (cat# 831, lot# P264-713)**

7025	Aldrin	µg/L	3.36	4.11	1.45 - 5.53	Acceptable	EPA 8081A 1 1996	3/25/2017	-0.0502	3.40	0.747	K. Martinez
7110	alpha-BHC	µg/L	5.87	6.40	2.78 - 8.77	Acceptable	EPA 8081A 1 1996	3/25/2017	0.306	5.55	1.04	K. Martinez
7115	beta-BHC	µg/L	2.31	2.29	1.06 - 3.41	Acceptable	EPA 8081A 1 1996	3/25/2017	0.565	2.12	0.338	K. Martinez
7105	delta-BHC	µg/L	6.88	7.16	3.09 - 10.0	Acceptable	EPA 8081A 1 1996	3/25/2017	0.360	6.46	1.15	K. Martinez
7120	gamma-BHC(Lindane)	µg/L	6.88	7.37	3.28 - 10.1	Acceptable	EPA 8081A 1 1996	3/25/2017	0.289	6.55	1.16	K. Martinez
7240	alpha-Chlordane	µg/L	6.24	6.79	3.05 - 9.06	Acceptable	EPA 8081A 1 1996	3/25/2017	0.270	5.90	1.27	K. Martinez
7245	gamma-Chlordane	µg/L	4.48	4.69	2.07 - 6.22	Acceptable	EPA 8081A 1 1996	3/25/2017	0.357	4.17	0.872	K. Martinez
7355	4,4'-DDD	µg/L	6.76	7.68	3.80 - 10.5	Acceptable	EPA 8081A 1 1996	3/25/2017	0.0664	6.66	1.47	K. Martinez
7360	4,4'-DDE	µg/L	5.77	6.62	2.86 - 8.93	Acceptable	EPA 8081A 1 1996	3/25/2017	-0.0746	5.86	1.23	K. Martinez
7365	4,4'-DDT	µg/L	2.91	2.88	1.14 - 4.25	Acceptable	EPA 8081A 1 1996	3/25/2017	0.294	2.74	0.580	K. Martinez
7470	Dieldrin	µg/L	3.56	3.59	1.81 - 4.81	Acceptable	EPA 8081A 1 1996	3/25/2017	0.503	3.22	0.669	K. Martinez
7540	Endrin	µg/L	5.76	7.25	3.18 - 10.3	Acceptable	EPA 8081A 1 1996	3/25/2017	-0.405	6.25	1.20	K. Martinez
7530	Endrin aldehyde	µg/L	9.66	10.8	4.05 - 15.5	Acceptable	EPA 8081A 1 1996	3/25/2017	0.0872	9.49	1.94	K. Martinez
7535	Endrin ketone	µg/L	12.1	12.6	6.79 - 16.5	Acceptable	EPA 8081A 1 1996	3/25/2017	0.357	11.3	2.23	K. Martinez
7510	Endosulfan I	µg/L	4.87	5.34	1.94 - 7.23	Acceptable	EPA 8081A 1 1996	3/25/2017	0.0978	4.77	0.995	K. Martinez
7515	Endosulfan II	µg/L	10.3	11.5	4.77 - 15.6	Acceptable	EPA 8081A 1 1996	3/25/2017	-0.00554	10.3	2.09	K. Martinez
7520	Endosulfan sulfate	µg/L	7.93	8.22	3.77 - 11.7	Acceptable	EPA 8081A 1 1996	3/25/2017	0.332	7.44	1.46	K. Martinez
7685	Heptachlor	µg/L	6.90	9.06	3.26 - 12.2	Acceptable	EPA 8081A 1 1996	3/25/2017	-0.356	7.37	1.32	K. Martinez
7690	Heptachlor epoxide (beta)	µg/L	4.54	4.80	2.40 - 6.42	Acceptable	EPA 8081A 1 1996	3/25/2017	0.374	4.21	0.873	K. Martinez
7810	Methoxychlor	µg/L	9.64	10.1	4.35 - 14.6	Acceptable	EPA 8081A 1 1996	3/25/2017	0.316	9.07	1.80	K. Martinez



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**WP Organochlorine Pesticides (cat# 831, lot# P264-713)**

7025	Aldrin	µg/L	3.36	4.11	1.45 - 5.53	Acceptable	EPA 8081B 2000	3/25/2017	-0.0502	3.40	0.747	K. Martinez
7110	alpha-BHC	µg/L	5.87	6.40	2.78 - 8.77	Acceptable	EPA 8081B 2000	3/25/2017	0.306	5.55	1.04	K. Martinez
7115	beta-BHC	µg/L	2.31	2.29	1.06 - 3.41	Acceptable	EPA 8081B 2000	3/25/2017	0.565	2.12	0.338	K. Martinez
7105	delta-BHC	µg/L	6.88	7.16	3.09 - 10.0	Acceptable	EPA 8081B 2000	3/25/2017	0.360	6.46	1.15	K. Martinez
7120	gamma-BHC(Lindane)	µg/L	6.88	7.37	3.28 - 10.1	Acceptable	EPA 8081B 2000	3/25/2017	0.289	6.55	1.16	K. Martinez
7240	alpha-Chlordane	µg/L	6.24	6.79	3.05 - 9.06	Acceptable	EPA 8081B 2000	3/25/2017	0.270	5.90	1.27	K. Martinez
7245	gamma-Chlordane	µg/L	4.48	4.69	2.07 - 6.22	Acceptable	EPA 8081B 2000	3/25/2017	0.357	4.17	0.872	K. Martinez
7355	4,4'-DDD	µg/L	6.76	7.68	3.80 - 10.5	Acceptable	EPA 8081B 2000	3/25/2017	0.0664	6.66	1.47	K. Martinez
7360	4,4'-DDE	µg/L	5.77	6.62	2.86 - 8.93	Acceptable	EPA 8081B 2000	3/25/2017	-0.0746	5.86	1.23	K. Martinez
7365	4,4'-DDT	µg/L	2.91	2.88	1.14 - 4.25	Acceptable	EPA 8081B 2000	3/25/2017	0.294	2.74	0.580	K. Martinez
7470	Dieldrin	µg/L	3.56	3.59	1.81 - 4.81	Acceptable	EPA 8081B 2000	3/25/2017	0.503	3.22	0.669	K. Martinez
7540	Endrin	µg/L	5.76	7.25	3.18 - 10.3	Acceptable	EPA 8081B 2000	3/25/2017	-0.405	6.25	1.20	K. Martinez
7530	Endrin aldehyde	µg/L	9.66	10.8	4.05 - 15.5	Acceptable	EPA 8081B 2000	3/25/2017	0.0872	9.49	1.94	K. Martinez
7535	Endrin ketone	µg/L	12.1	12.6	6.79 - 16.5	Acceptable	EPA 8081B 2000	3/25/2017	0.357	11.3	2.23	K. Martinez
7510	Endosulfan I	µg/L	4.87	5.34	1.94 - 7.23	Acceptable	EPA 8081B 2000	3/25/2017	0.0978	4.77	0.995	K. Martinez
7515	Endosulfan II	µg/L	10.3	11.5	4.77 - 15.6	Acceptable	EPA 8081B 2000	3/25/2017	-0.00554	10.3	2.09	K. Martinez
7520	Endosulfan sulfate	µg/L	7.93	8.22	3.77 - 11.7	Acceptable	EPA 8081B 2000	3/25/2017	0.332	7.44	1.46	K. Martinez
7685	Heptachlor	µg/L	6.90	9.06	3.26 - 12.2	Acceptable	EPA 8081B 2000	3/25/2017	-0.356	7.37	1.32	K. Martinez
7690	Heptachlor epoxide (beta)	µg/L	4.54	4.80	2.40 - 6.42	Acceptable	EPA 8081B 2000	3/25/2017	0.374	4.21	0.873	K. Martinez
7810	Methoxychlor	µg/L	9.64	10.1	4.35 - 14.6	Acceptable	EPA 8081B 2000	3/25/2017	0.316	9.07	1.80	K. Martinez



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Environmental Quality Lab  
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7115	beta-BHC	µg/L	2.31	2.29	1.06 - 3.41	Acceptable	EPA 608 Appendix A	3/25/2017	0.565	2.12	0.338	K. Martinez
7105	delta-BHC	µg/L	6.88	7.16	3.09 - 10.0	Acceptable	EPA 608 Appendix A	3/25/2017	0.360	6.46	1.15	K. Martinez
7120	gamma-BHC(Lindane)	µg/L	6.88	7.37	3.28 - 10.1	Acceptable	EPA 608 Appendix A	3/25/2017	0.289	6.55	1.16	K. Martinez
7240	alpha-Chlordane	µg/L	6.24	6.79	3.05 - 9.06	Acceptable	EPA 608 Appendix A	3/25/2017	0.270	5.90	1.27	K. Martinez
7245	gamma-Chlordane	µg/L	4.48	4.69	2.07 - 6.22	Acceptable	EPA 608 Appendix A	3/25/2017	0.357	4.17	0.872	K. Martinez
7355	4,4'-DDD	µg/L	6.76	7.68	3.80 - 10.5	Acceptable	EPA 608 Appendix A	3/25/2017	0.0664	6.66	1.47	K. Martinez
7360	4,4'-DDE	µg/L	5.77	6.62	2.86 - 8.93	Acceptable	EPA 608 Appendix A	3/25/2017	-0.0746	5.86	1.23	K. Martinez
7365	4,4'-DDT	µg/L	2.91	2.88	1.14 - 4.25	Acceptable	EPA 608 Appendix A	3/25/2017	0.294	2.74	0.580	K. Martinez
7470	Dieldrin	µg/L	3.56	3.59	1.81 - 4.81	Acceptable	EPA 608 Appendix A	3/25/2017	0.503	3.22	0.669	K. Martinez
7540	Endrin	µg/L	5.76	7.25	3.18 - 10.3	Acceptable	EPA 608 Appendix A	3/25/2017	-0.405	6.25	1.20	K. Martinez
7530	Endrin aldehyde	µg/L	9.66	10.8	4.05 - 15.5	Acceptable	EPA 608 Appendix A	3/25/2017	0.0872	9.49	1.94	K. Martinez
7535	Endrin ketone	µg/L	12.1	12.6	6.79 - 16.5	Acceptable	EPA 608 Appendix A	3/25/2017	0.357	11.3	2.23	K. Martinez
7510	Endosulfan I	µg/L	4.87	5.34	1.94 - 7.23	Acceptable	EPA 608 Appendix A	3/25/2017	0.0978	4.77	0.995	K. Martinez
7515	Endosulfan II	µg/L	10.3	11.5	4.77 - 15.6	Acceptable	EPA 608 Appendix A	3/25/2017	-0.00554	10.3	2.09	K. Martinez
7520	Endosulfan sulfate	µg/L	7.93	8.22	3.77 - 11.7	Acceptable	EPA 608 Appendix A	3/25/2017	0.332	7.44	1.46	K. Martinez
7685	Heptachlor	µg/L	6.90	9.06	3.26 - 12.2	Acceptable	EPA 608 Appendix A	3/25/2017	-0.356	7.37	1.32	K. Martinez
7690	Heptachlor epoxide (beta)	µg/L	4.54	4.80	2.40 - 6.42	Acceptable	EPA 608 Appendix A	3/25/2017	0.374	4.21	0.873	K. Martinez
7810	Methoxychlor	µg/L	9.64	10.1	4.35 - 14.6	Acceptable	EPA 608 Appendix A	3/25/2017	0.316	9.07	1.80	K. Martinez



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**WP Chlordane (cat# 837, lot# P264-716)**

7250	Chlordane, technical	µg/L	7.49	8.00	3.40 - 11.0	Acceptable	EPA 8081A 1 1996	2/25/2017	0.458	6.78	1.56	K. Martinez
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**WP Chlordane (cat# 837, lot# P264-716)**

7250	Chlordane, technical	µg/L	7.49	8.00	3.40 - 11.0	Acceptable	EPA 8081B 2000	2/25/2017	0.458	6.78	1.56	K. Martinez
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**WP Chlordane (cat# 837, lot# P264-716)**

7250	Chlordane, technical	µg/L	7.49	8.00	3.40 - 11.0	Acceptable	EPA 608 Appendix A	2/25/2017	0.458	6.78	1.56	K. Martinez
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**WP Toxaphene (cat# 838, lot# P264-717)**

8250	Toxaphene	µg/L	28.5	31.9	7.11 - 48.3	Acceptable	EPA 8081A 1 1996	2/25/2017	0.180	27.7	4.56	K. Martinez
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**WP Toxaphene (cat# 838, lot# P264-717)**

8250	Toxaphene	µg/L	28.5	31.9	7.11 - 48.3	Acceptable	EPA 8081B 2000	2/25/2017	0.180	27.7	4.56	K. Martinez
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**WP Toxaphene (cat# 838, lot# P264-717)**

8250	Toxaphene	µg/L	28.5	31.9	7.11 - 48.3	Acceptable	EPA 608 Appendix A	2/25/2017	0.180	27.7	4.56	K. Martinez
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**WP Gasoline Range Organics (GRO) in Water (cat# 640, lot# P264-762)**

9408	Gasoline Range Organics (GRO)	µg/L	2174	2940	1120 - 5150	Acceptable	EPA 8015B 2 1996	2/16/2017	-1.55	3570	897	K. Otero
4375	Benzene in GRO	µg/L		30.0	15.1 - 47.7	Not Reported				28.6	3.08	
4765	Ethylbenzene in GRO	µg/L		101	62.6 - 141	Not Reported				101	12.9	
5140	Toluene in GRO	µg/L		248	139 - 323	Not Reported				248	28.4	
5260	Xylenes, total in GRO	µg/L		294	184 - 408	Not Reported				309	40.2	

**WP Diesel Range Organics (DRO) in Water (cat# 641, lot# P264-764)**

9369	Diesel Range Organics (DRO)	µg/L	2921	3640	898 - 4580	Acceptable	EPA 8015B 2 1996	3/28/2017	0.345	2630	837	R. Marrero
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**WP Total Petroleum Hydrocarbons (TPH) in Water (cat# 642, lot# P264-642)**

1935	TPH (Gravimetric)	mg/L	59.5	80.0	37.2 - 116	Acceptable	EPA 1664A	2/22/2017	-1.13	68.9	8.31	D. Silva
1935	TPH (IR)	mg/L		98.4	46.3 - 142	Not Reported				89.8	16.4	



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# CERTIFICATE OF RECOGNITION

ERA congratulates  
**Environmental Quality Lab**  
**WP-264**

For your participation and successful evaluation, we recognize the performance of this laboratory for achieving acceptable evaluation in the following standards.

Acids	Base/Neutrals	Chlordane	Chlorinated Acid Herbicides	Color
Complex Nutrients	Demand	Diesel Range Organics (DRO) in Water	Gasoline Range Organics (GRO) in Water	Hardness
Hexavalent Chromium	Low-Level Mercury	Low-Level Total Residual Chlorine	Mercury	Nitrite
Oil & Grease	Organochlorine Pesticides	PCBs in Oil	PCBs in Water	pH
Silica	Simple Nutrients	Sulfide	Surfactants - MBAS	Total Cyanide
Total Petroleum Hydrocarbons (TPH) in Water	Total Phenolics (4-AAP)	Total Residual Chlorine	Toxaphene	Trace Metals
Turbidity	WasteWatR™ Coliform MicrobE™ - SM 9221			



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Patrick Larson  
Quality Officer



**Janet Gomez**  
**Environmental Quality Lab**  
**PO Box 11458**  
**Santurce, PR 00910**  
**USA**

***WP-266***  ***Final Report***

The section header consists of the text "WP-266" in a bold, italicized font, followed by a circular logo. The logo is green and white, depicting a stylized water droplet or leaf shape. To the right of the logo is the text "Final Report" in a bold, italicized font. A small "TM" trademark symbol is located at the bottom right of the logo.

**WatR™ Pollution Proficiency Testing**

**WatR™ Pollution Study**

**Open Date: 03/13/17**

**Close Date: 04/27/17**

**Report Issued Date: 05/01/17**



A Waters Company

May 1, 2017

Janet Gomez  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910

Enclosed is your final report for ERA's WP-266 WatR™ Pollution Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WP-266 WatR™ Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the current TNI Fields of Proficiency Testing (FoPT) tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the current TNI FoPT tables. If the analyte is not included in the TNI FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 730002268).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have many years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be useful in helping you work through your technical issues.

At the request of the TNI Accreditation Council, we have included a Laboratory Exception Report that includes a list of all analytes reported with less than qualifiers when the assigned value was greater than "0." In addition, because we have received many requests from laboratories, this report also includes a list of all analytes with "Not Acceptable" evaluations.

Some states have elected not to convert to the 2009 TNI Standards at this time. If you have released your results to a state that has retained the 2003 NELAC Evaluation Criteria, your final report will include a section that evaluates the results according to the 2003 Standard in addition to the 2009 TNI Standards.

Thank you for your participation in ERA's WP-266 WatR™ Pollution Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink that reads "Patrick Larson".

Patrick Larson  
Quality Officer

attachments



A Waters Company

<b>Report Recipient</b>	<b>Contact/Phone Number</b>	<b>Reporting Type</b>	<b>Evaluation Type</b>
A2LA	Atefeh Fathi / 301-644-3200	All Analytes	2009 TNI
Florida	Vanessa Soto / 904-791-1599	All Analytes	2009 TNI



A Waters Company

# WP-266 Definitions & Study Discussion

**Study Dates: 03/13/17 - 04/27/17**

**Report Issued: 05/01/17**

## WP Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current TNI Fields of Proficiency Testing (FoPT) tables. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2009 TNI Standards. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current USEPA/NELAC FoPT tables, or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = No Value reported.

The Method Description is the method the laboratory reported to ERA.

## WP Study Discussion

ERA's WP-266 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) tables.

ERA's WP-266 WatR™Pollution study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2009 TNI PT Standard and the criteria contained in the most current TNI FoPT tables.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WP-266 WatR™Pollution study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™Pollution Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





A Waters Company

# WP-266 Laboratory Exception Report

**Janet Gomez**  
**QA/QC Supervisor**  
**Environmental Quality Lab**  
**PO Box 11458**  
**Santurce, PR 00910**  
**787-288-6420**

**EPA ID:**  
**ERA Customer Number:**  
**Report Issued:**  
**Study Dates:**

**PR00014**  
**E359301**  
**05/01/17**  
**03/13/17 - 04/27/17**

## 2009 TNI Evaluation Checks

There are no values reported with < where the assigned value was greater than 0.

## 2009 TNI Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.





# Final Report Results For Laboratory Environmental Quality Lab





## 2009 TNI Evaluation Report

Study: **WP-266**

ERA Customer Number: **E359301**

Laboratory Name: **Environmental Quality  
Lab**

### Inorganic Results





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# WP-266 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
E359301  
05/01/17  
03/13/17 - 04/27/17

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Minerals (cat# 581, lot# P266-506)**

1505	Alkalinity as CaCO3	mg/L		53.5	45.5 - 61.6	Not Reported				52.8	2.41	
1575	Chloride	mg/L		109	95.7 - 123	Not Reported				105	4.51	
1610	Conductivity at 25°C	µmhos/cm	507	537	483 - 591	Acceptable	SM 2510 B-2011 2011	3/17/2017	-1.70	539	18.7	S. Vázquez
1730	Fluoride	mg/L		1.50	1.18 - 1.78	Not Reported				1.46	0.0915	
1125	Potassium	mg/L		29.2	23.4 - 35.0	Not Reported				28.7	1.60	
1155	Sodium	mg/L		94.9	75.9 - 114	Not Reported				91.8	4.76	
2000	Sulfate	mg/L		32.1	26.0 - 37.0	Not Reported				31.1	2.12	
1955	Total Dissolved Solids at 180°C	mg/L		346	301 - 391	Not Reported				345	17.1	
1950	Total Solids at 105°C	mg/L		358	313 - 403	Not Reported				358	20.8	

**WP Minerals (cat# 581, lot# P266-506)**

1505	Alkalinity as CaCO3	mg/L		53.5	45.5 - 61.6	Not Reported				52.8	2.41	
1575	Chloride	mg/L		109	95.7 - 123	Not Reported				105	4.51	
1610	Conductivity at 25°C	µmhos/cm	507	537	483 - 591	Acceptable	EPA 120.1 1982	3/17/2017	-1.70	539	18.7	S. Vázquez
1730	Fluoride	mg/L		1.50	1.18 - 1.78	Not Reported				1.46	0.0915	
1125	Potassium	mg/L		29.2	23.4 - 35.0	Not Reported				28.7	1.60	
1155	Sodium	mg/L		94.9	75.9 - 114	Not Reported				91.8	4.76	
2000	Sulfate	mg/L		32.1	26.0 - 37.0	Not Reported				31.1	2.12	
1955	Total Dissolved Solids at 180°C	mg/L		346	301 - 391	Not Reported				345	17.1	
1950	Total Solids at 105°C	mg/L		358	313 - 403	Not Reported				358	20.8	

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : WP-266





## 2009 TNI Evaluation Report

Study: **WP-266**

ERA Customer Number: **E359301**

Laboratory Name: **Environmental Quality  
Lab**

### Organic Results





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# WP-266 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
E359301  
05/01/17  
03/13/17 - 04/27/17

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Volatiles (cat# 830, lot# P266-710)**

4315	Acetone	µg/L		30.2	6.71 - 53.9	Not Reported				27.6	5.89	
4320	Acetonitrile	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4325	Acrolein	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4340	Acrylonitrile	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4375	Benzene	µg/L		< 7.00	0.00 - 7.00	Not Reported						
4385	Bromobenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4390	Bromochloromethane	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4395	Bromodichloromethane	µg/L		25.0	15.0 - 35.0	Not Reported				24.9	2.10	
4400	Bromoform	µg/L		< 6.00	0.00 - 6.00	Not Reported						
4950	Bromomethane	µg/L		< 8.00	0.00 - 8.00	Not Reported						
4410	2-Butanone (MEK)	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4435	n-Butylbenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4440	sec-Butylbenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4445	tert-Butylbenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
5000	tert-Butyl methyl ether (MTBE)	µg/L		36.2	23.7 - 49.7	Not Reported				37.4	4.46	
4450	Carbon disulfide	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4455	Carbon tetrachloride	µg/L		30.4	16.6 - 41.8	Not Reported				29.1	3.20	
4475	Chlorobenzene	µg/L		12.0	8.40 - 15.6	Not Reported				11.8	1.09	
4575	Chlorodibromomethane	µg/L		19.4	11.6 - 27.2	Not Reported				19.1	2.00	
4485	Chloroethane	µg/L		22.0	8.80 - 35.2	Not Reported				22.1	3.29	

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : WP-266





A Waters Company

# WP-266 2009 TNI Evaluation Final Complete Report

Janet Gomez  
QA/QC Supervisor  
Environmental Quality Lab  
PO Box 11458  
Santurce, PR 00910  
787-288-6420

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

PR00014  
E359301  
05/01/17  
03/13/17 - 04/27/17

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Volatiles (cat# 830, lot# P266-710) (Continued)**

4500	2-Chloroethylvinylether	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4505	Chloroform	µg/L		59.4	41.6 - 77.2	Not Reported				59.0	5.33	
4960	Chloromethane	µg/L		< 8.00	0.00 - 8.00	Not Reported						
4535	2-Chlorotoluene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4540	4-Chlorotoluene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/L		26.1	15.7 - 36.5	Not Reported				24.8	4.00	
4585	1,2-Dibromoethane (EDB)	µg/L		19.8	12.9 - 26.7	Not Reported				19.3	1.93	
4595	Dibromomethane	µg/L		< 6.50	0.00 - 6.50	Not Reported						
4610	1,2-Dichlorobenzene	µg/L		< 7.00	0.00 - 7.00	Not Reported						
4615	1,3-Dichlorobenzene	µg/L		32.2	22.5 - 41.9	Not Reported				31.4	2.69	
4620	1,4-Dichlorobenzene	µg/L		29.6	20.7 - 38.5	Not Reported				29.0	2.00	
4625	Dichlorodifluoromethane (Freon 12)	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4630	1,1-Dichloroethane	µg/L		22.3	14.2 - 30.7	Not Reported				22.1	1.94	
4635	1,2-Dichloroethane	µg/L		< 10.6	0.00 - 10.6	Not Reported						
4640	1,1-Dichloroethylene	µg/L	20.0	16.3	9.79 - 24.3	Acceptable	EPA 8260B 2 1996	4/21/2017	1.85	16.3	2.02	K. Otero
4645	cis-1,2-Dichloroethylene	µg/L		< 7.00	0.00 - 7.00	Not Reported						
4700	trans-1,2-Dichloroethylene	µg/L	< 1.20	< 6.00	0.00 - 6.00	Acceptable	EPA 8260B 2 1996	4/21/2017				K. Otero
4655	1,2-Dichloropropane	µg/L		37.9	26.5 - 49.3	Not Reported				37.7	3.17	
4660	1,3-Dichloropropane	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4665	2,2-Dichloropropane	µg/L		< 5.00	0.00 - 5.00	Not Reported						

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : WP-266





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**WP Volatiles (cat# 830, lot# P266-710) (Continued)**

4670	1,1-Dichloropropene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4680	cis-1,3-Dichloropropylene	µg/L		18.6	12.1 - 25.1	Not Reported				16.4	2.21	
4685	trans-1,3-Dichloropropylene	µg/L		47.5	30.9 - 64.1	Not Reported				46.4	4.26	
4765	Ethylbenzene	µg/L	< 1.20	< 7.00	0.00 - 7.00	Acceptable	EPA 8260B 2 1996	4/21/2017				K. Otero
4835	Hexachlorobutadiene	µg/L		< 4.30	0.00 - 4.30	Not Reported						
4840	Hexachloroethane	µg/L		< 3.30	0.00 - 3.30	Not Reported						
4860	2-Hexanone	µg/L		25.5	7.40 - 41.5	Not Reported				24.5	3.71	
4900	Isopropylbenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4910	4-Isopropyltoluene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
4975	Methylene chloride	µg/L		35.1	21.1 - 49.1	Not Reported				35.1	4.29	
4995	4-Methyl-2-pentanone (MIBK)	µg/L		74.4	40.1 - 107	Not Reported				74.6	9.59	
5005	Naphthalene	µg/L		< 6.30	0.00 - 6.30	Not Reported						
5015	Nitrobenzene	µg/L		24.4	7.05 - 42.5	Not Reported				19.8	2.69	
5090	n-Propylbenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						
5100	Styrene	µg/L		36.1	23.5 - 48.7	Not Reported				35.6	3.61	
5105	1,1,1,2-Tetrachloroethane	µg/L		23.9	15.5 - 32.3	Not Reported				23.7	1.95	
5110	1,1,2,2-Tetrachloroethane	µg/L		< 9.80	0.00 - 9.80	Not Reported						
5115	Tetrachloroethylene	µg/L		26.5	14.0 - 34.9	Not Reported				24.3	3.18	
5140	Toluene	µg/L		< 7.00	0.00 - 7.00	Not Reported						
5150	1,2,3-Trichlorobenzene	µg/L		< 5.00	0.00 - 5.00	Not Reported						

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : WP-266





A Waters Company

# WP-266 2009 TNI Evaluation Final Complete Report

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EPA ID:  
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Study Dates:

PR00014  
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TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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**WP Volatiles (cat# 830, lot# P266-710) (Continued)**

5155	1,2,4-Trichlorobenzene	µg/L		39.0	15.7 - 53.2	Not Reported				36.9	3.80	
5160	1,1,1-Trichloroethane	µg/L		17.4	10.4 - 24.4	Not Reported				16.3	1.74	
5165	1,1,2-Trichloroethane	µg/L		51.5	36.0 - 67.0	Not Reported				51.3	4.79	
5170	Trichloroethylene	µg/L		21.4	13.5 - 28.8	Not Reported				20.4	2.07	
5175	Trichlorofluoromethane	µg/L		27.7	11.1 - 44.3	Not Reported				27.8	3.87	
5180	1,2,3-Trichloropropane (TCP)	µg/L		34.1	13.6 - 52.7	Not Reported				31.4	7.05	
5210	1,2,4-Trimethylbenzene	µg/L		17.2	11.2 - 23.2	Not Reported				15.6	1.74	
5215	1,3,5-Trimethylbenzene	µg/L		< 6.50	0.00 - 6.50	Not Reported						
5225	Vinyl acetate	µg/L		< 5.00	0.00 - 5.00	Not Reported						
5235	Vinyl chloride	µg/L		< 8.00	0.00 - 8.00	Not Reported						
5240	m&p-Xylene	µg/L		40.4	24.2 - 56.6	Not Reported				38.5	3.47	
5250	o-Xylene	µg/L		26.6	16.0 - 37.2	Not Reported				26.0	3.03	
5260	Xylenes, total	µg/L		67.0	40.2 - 93.8	Not Reported				64.9	7.15	

All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01

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Study # : WP-266



# CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for

**WP-266**

**Environmental Quality Lab**

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 1061 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Minerals

Volatiles



---

Patrick Larson  
Quality Officer

**Attachment 5**  
**Sampling and Monitoring Field Form**

**Groundwater Extraction and Treatment System (GWETS) Sampling and Monitoring Field Form  
Fibers Public Supply Wells Superfund Site  
Guayama, Puerto Rico**

Collection Date	Sample ID	Collection Time	Sampler's Initials
08-01-17	TB-20170801	LAB	LAB
08-01-17	INF-20170801	0745	AC/FC
08-01-17	EFF-20170801	0838	AC/FC
08-01-17	EFFD4P-20170801	0838	AC/FC
08-01-17	EFFM5-20170801	0838	AC/FC
08-01-17	EFFMSD-20170801	0838	AC/FC

**GWETS Operational Data at Sample Collection**

**Extraction Wells**

RW-2	94.7	gpm
RW-4	144.7	gpm
RW-5	70.0	gpm

**Compound Treatment System**

Influent Flow Rate (FIT-101)	305.3	gpm
Effluent Flow Rate (FIT-301)	371.3	gpm
Blower (FIT-201A)	2539	cfm
Influent Flow Pressure (PIT-101)	2.6	psi
Effluent Flow Pressure (PIT-301)	23.6	psi
pH (pHIT-201A)	8.4	

**Notes:**

gpm = gallons per minute

cfm = cubic feet per minute

psi = pounds per square inch